Master Thesis

COVID-19 in Austria: differences across regions and healthcare facilities as regards visitors policies

submitted by

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Declaration of Academic Integrity

I hereby confirm that the present diploma thesis is the result of my own independent scholarly work. I also confirm that in all cases, where material from the work of others (in books, articles, essays, dissertations, and on the internet) is acknowledged, quotations and paraphrases are clearly indicated. No material other than that cited in the reference list has been used. I have read and understood the Medical University's regulations and procedures concerning plagiarism.

Graz, 16th of September 2022 Lucía Jiménez García, BSc eh.

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Abbreviations

AGES: Agentur für Gesundheit und Ernährungssicherheit (Austrian Agency for Health and Food Safety)

BMBWF: Bundesministerium für Bildung, Wissenschaft und Forschung (Austrian Federal Ministry of Education, Science and Research)

BMSGKP: Bundesministerium für Soziales, Gesundheit, Pflege und Konsumentenschutz (Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection)

COVID-19: coronavirus disease 2019

FCC: Family-centered care

ICU: Intensive Care Unit

ICUs: Intensive Care Units

NUTS: Nomenclature des unités territoriales statistiques

PPE: Personal Protective Equipment

SARS-CoV-2: severe acute respiratory syndrome coronavirus 2

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Zusammenfassung

Einleitung: Während der zweiten COVID-19-Welle zwischen September 2020 und Februar 2021 kam es zu weltweiten Einschränkungen. Auch in Österreich hat die Bundesregierung mehrere Beschränkungen beschlossen, die von den Bundesländern und deren Gesundheitseinrichtungen je nach epidemiologischer Situation umgesetztwerden mussten. Eine dieser Maßnahmen war die Einschränkung von Besuchen in Gesundheitseinrichtungen, was sich negativ auf Patientinnen und Patienten, Familien und medizinisches Personal auswirken könnte. Ziel dieser Masterarbeit ist es, die Unterschiede zwischen den österreichischen Regionen und Einrichtungen in Bezug auf die Besuchsbeschränkung zu beschreiben.

Methode: Es wurde eine Querschnittsstudie in allen Gesundheitseinrichtungen in Österreich durchgeführt. Die Daten wurden zwischen dem 12. November 2020 und dem 2. März 2021 mittels eines Online-Fragebogens mit 31 Fragen erhoben. Bei den Fragen 16, 17 und 18 handelte es sich um Multiple-Choice-Fragen, die sich auf die Information und das Management von Besucher*innen fokussieren und mittels deskriptiver Statistik ausgewertet wurden.

Ergebnisse: Von 2.008 Fragebögen wurden 1670 vollständig ausgefüllt. Die wichtigste Maßnahme zur Einschränkung der Besucher*innenzahl war die Limitation der Besucher*innenzahl (n=1367; 81,9%). 41% (n=685) der Teilnehmer*innen waren der Ansicht, dass die Regeln bezüglich der Informationen, die den Besucher*innen weitergegeben werden sollten, nicht klar waren. Verantwortlich für die Umsetzung der Besuchsbeschränkungen waren die Pflegedienstleiter*innen (n=1143; 68,4%). Die am häufigsten durchgeführte organisatorische Maßnahme war die Überprüfung der korrekten Anwendung von Schutzmasken (n=573; 72,8%).

Diskussion: Die Ergebnisse zeigten statistisch signifikante Unterschiede zwischen den Regionen und der Begrenzung der Besucher*innen, der Häufigkeit und Dauer der Besuche, der Gesundheitskontrollen der Besucher*innen und der Besucherregistrierung. Obwohl die restriktiven Maßnahmen an die jeweilige epidemiologische Situation angepasst wurden, könnten diese Unterschiede in benachbarten Gebieten ein Problem darstellen. Darüber hinaus gibt es keine eindeutigen Hinweise darauf, dass Besucher*innen das Risiko nosokomialer Infektionen erhöhen. Des Weiteren sollten Maßnahmen zur Einschränkung

von Besucher*innen in einem Kontext erwogen werden, in dem persönliche Schutzausrüstung (PSA) ausreichend vorhanden ist. Darüber hinaus verzeichneten Pflegeheime einen höheren Prozentsatz bei der Umsetzung von Besuchsbeschränkungsmaßnahmen und organisatorischen Maßnahmen. Der Kommunikationsfluss sowie die Umsetzungsstrategien in Pflegeheimen sollten dahingehend weiter erforscht werden.

Abstract

Introduction: During the second COVID-19 wave in Austria, between September 2020 and February 2021, the government of Austria approved several restrictions that could be adapted by the federal states and different healthcare facilities according to the epidemiological situation. One of those measures was the restriction of visits in healthcare facilities, which could have a negative impact on patients, families and healthcare professionals. The aim of this Master thesis is to describe the differences between Austrian federal states and settings with regards to visitor restriction policies.

Method: a cross-sectional study was conducted in all healthcare settings in Austria. Data were collected between 12th November 2020 and 2nd March 2021 using an online questionnaire with 31 questions. Questions 16, 17, 18 were multiple choice questions that focused on the information and management of visitors and therefore, were analyzed using descriptive statistics.

Results: From 2,008 questionnaires, 1670 were fully completed. The main visitor restriction policy that was implemented was the limitation of number of visitors (n=1367; 81.9%). 41% (n=685) of participants found that rules regarding the information that should be given to visitors were not clear. The responsible person for the implementation of visitor restriction policies were nurse managers (n=1143; 68.4%). In addition, the most performed organizational measure was the verification of the correct use of masks (n=573; 72.8%).

Discussion: The findings showed statistically significant differences between regions and the limitation of visitors, the frequency and duration of visits, visitor health checks and visitor registration. Although restrictive measures were adapted according to the epidemiological situation, these differences could pose a problem in neighbouring areas. In addition, there is unclear evidence that visitors increase the risk of nosocomial infections. Therefore, visitor restriction policies should be considered in a context where Personal Protective Equipment (PPE) is not scarce. Furthermore, nursing homes registered higher percentage in the implementation of visitor restriction policies and organizational measures. The communication network and implementation strategies used in nursing homes should be further explored.

1 Introduction

This chapter provides an overview of the COVID-19 outbreak and the first COVID-19 wave in Austria. It continues with the description of the second COVID-19 wave in Austria and the situation in different settings. Finally, the measures that were approved by the Austrian government to reduce the transmission of SARS-CoV-2 and to avoid the overloading of healthcare system are explained.

1.1 COVID-19 outbreak

In December 2019 an outbreak of several cases of pneumonia of unknown cause in the Huanan Seafood Wholesale Market, in Wuhan, Hubei, China was reported to the World Health Organization (WHO) (Wu, Chen and Chan, 2020). On 7 January, 2020 a novel coronavirus was identified by the Chinese authorities as the cause and was temporarily named as "2019-nCOV" (Wu, Chen and Chan, 2020). As of January 31st 2020 there were 9,826 confirmed cases worldwide (WHO, 2020b). 9,720 cases were diagnosed in China, whereas 106 cases were in other countries (WHO, 2020b). Overall 19 countries registered at least 1 case of the novel coronavirus (2019-nCOV) (WHO, 2020b). The first European countries that registered confirmed cases were at this time point France (6 cases), Finland (1 case), Germany (5 cases) and Italy (2 cases) (WHO, 2020b).

On February 2020 the novel coronavirus 2019-nCOV was renamed SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). In addition, the WHO announced the official name for the illness: COVID-19 (coronavirus disease 2019) (WHO, 2022a).

On 12 March 2020 the WHO declared the novel coronavirus outbreak a global pandemic due to the rapid escalation of COVID-19 in the European Region, where there were more than 20,000 confirmed cases and almost 1,000 deaths had been already registered (WHO, 2022b). By mid-March the European region was the centre of the pandemic (WHO, 2022b).

1.2 First COVID-19 wave in Austria

In Austria the first two cases of COVID-19 were reported on 25 February 2020 (Nagel *et al.*, 2021). Initially, the SARS-CoV-2 spread rapidly in all states of Austria and specifically in Tyrol, which was the federal state that registered the highest number of infection rates per 100,000 habitants in the first COVID-19 wave (Nagel *et al.*, 2021). In the first two weeks of March the effective reproduction number (R), the net number of people to whom an infected person spreads the virus, was 1.81 in Austria. Due to the rapid increase of new cases, the Austrian government imposed a national lockdown on 16 March 2020 on all citizens, which led to restrictions on public life. Leaving the house was not generally permitted with some exceptions. After 4 days of lockdown the effective reproduction number decreased to 1.14. In the beginning of April R dropped to 0.63, which led to an easing of restrictions by mid-April (Nagel *et al.*, 2021). During summer 2020 there were scattered regional clusters (e.g. Upper Austria) (Pollak, Kowarz and Partheymüller, 2020).

1.3 Second COVID-19 wave in Austria

In August 2020 started to increase the number of new cases of COVID-19. In the first half of September the number of new infections started to increase sharply. Within a few days, the number of cases increased from 200 to 400 per day to 600 to 800 (AGES, 2020a; Pollak, Kowarz and Partheymüller, 2021). As a consequence the chancellor of Austria, Sebastian Kurz declared on 13 September 2020 the beginning of the second COVID-19 wave in Austria (ORF, 2020a).

The *"Corona traffic light"* started to be active in September 2020 to be used additionally to other measures, as a prevention instrument to avoid the spread of SARS-CoV-2 (Pollak, Kowarz and Partheymüller, 2021). A so-called Corona Commission would evaluate weekly the epidemiological situation in federal, state and district level. The Austrian map would be coloured to describe the public health risk and the risk of overloading the healthcare system, so red would be the highest risk stage and green the lowest risk stage (BMSGPK, 2020b).

On November 1, 2020 a decree[1] by the Ministry of Health was published, which implemented a "*light*" lockdown that came into force on 3rd of November 2020.

[1] §19 COVID-19-SchuMaV, BGBI II Nr. 463/2020

Restaurants and cultural institutions[2] had to close while all shops were kept open[3]. Furthermore, a curfew during the night (20:00 – 6:00)[4] was introduced and Universities and high school classes had to switch to "distance learning"[5].

The peak of new infections with 9,209 new cases was reached on 11th of November (AGES, 2020a). Moreover, the prevalence study carried out between 12th and 14th of November showed a prevalence rate of 3.1% in private households, that varied between regions, with higher prevalence rates in Western Austria than Eastern Austria (BMBWF, 2020). As a result, the government implemented a 2nd "*hard*" lockdown[6] that would last till the 6th of December. During these 3 weeks leaving the house was not permitted with some exceptions, schools were closed and only shops that provided basic supply were kept open. On December 7, 2020 the 2nd "*hard*" lockdown ended[7]. But on December 26, 2020 a 3rd "*hard"* lockdown[8] was implemented, which was extended till February 2021[9]. On February 7, 2021 the measures were eased by decree[10].

1.3.1 Situation in different healthcare facilities in the second COVID-19 wave

During the second COVID-19 wave in Austria the number of new COVID-19 cases and as a consequence, the number of people that had to be hospitalized started to increase continuously during September and October 2020 (AGES, 2020a). On 1st of September there were 119 hospitalized COVID-19 patients, which increased to 1,602 on October 31 (AGES, 2020a). Due to the epidemiological situation, the "*Corona traffic light*" switched to red as of 5 of November (Pollak, Kowarz and Partheymüller, 2021), .

In order to establish the risk of overloading the healthcare system in Austria, the Corona Commission defined threshold values for bed occupancy in adults intensive care units

[2] §7 Abs. 1. §12 Abs. 1 Abs. 2. COVID-19-SchuMaV, BGBI II Nr. 463/2020
[3] §5 COVID-19-SchuMaV, BGBI II Nr. 463/2020
[4] §1 COVID-19-SchuMaV, BGBI II Nr. 463/2020
[5] §15 COVID-19-SchuMaV, BGBI II Nr. 463/2020
[6] COVID-19-NotMV BGBI II Nr. 479/2020
[7] § 19 Abs 1. COVID-19-NotMV BGBI II Nr. 479/2020
[8] § 19 Abs. 1 Änderung der 3. COVID-19-SchuMaV und 2. COVID-19-NotMV, BGBI II Nr. 598/2020
[9] § 20 COVID-19-NotMV, BGBI II Nr. 27/2021
[10] § 22 4. COVID-19-SchuMaV, BGBI II Nr. 58/2021

(ICUs). If the bed occupancy in ICUs for adults was over 33%, the risk of overloading the healthcare system would be considered very high (AGES, 2020b; BMSGPK, 2021). From 9th of September 2020 the bed occupancy in ICUs started to increase and in November 2020 far exceed the values of the first COVID-19 wave in Austria (AGES, 2020b). The peak was reached on 25th of November with 709 patients in ICUs (AGES, 2020a) and therefore, the risk of overloading the Austrian healthcare system was elevated to high risk.

At the same time period, nursing homes reported also a rapid increase in COVID-19 cases, from 400 by the end of October to more than 1,000 new COVID-19 cases in the first 10 days of November (Der Standard, 2020). For example, in Upper Austria, 89 nursing homes reported new cases of COVID-19 on 9th of November (Land Oberösterreich, 2020). In total, 375 healthcare professionals and 398 residents were infected with SARS-CoV-2 (Land Oberösterreich, 2020). Salzburg reported that almost 20% of hospitalized patients with COVID-19 were residents from nursing homes (Kurier, 2020). As of 10th of November 167 residents and 136 healthcare professional were infected with COVID-19 in Tyrol (Kurier, 2020). In Vienna 233 out of 17,000 residentes were diagnosed with COVID-19 233 (Kurier, 2020).

1.3.2 Measures with regards to visitors policies

In order to decrease the number of new cases of COVID-19 the Austrian government followed the WHO recommendations for infection prevention in healthcare settings, like limiting the number of visitors who were in contact with a suspected or confirmed COVID-19 patient (WHO, 2020a). The Austrian government distinguished between nursing homes, healthcare facilities for people with disabilities and hospitals. Consequently, rules restricting visits were slightly different.

In nursing homes and healthcare facilities for people with disabilities, visits during the "*light*" lockdown were permitted, if they presented a negative antigen or PCR test, and if this was not possible, visitors were required to wear a mask[11]. One visitor every two days per resident was permitted and during the "*light"* lockdown not more than two different visitors could visit the resident[12]. In the 2nd "*hard"* lockdown visits were not allowed with some exceptions, like end-of-life care and with residents highly dependent and people under 18 years old with disabilities. In the last two exceptions, a maximum number of two

[11] §10 Abs. 4 COVID-19SchuMaV 2020 BGBI II 2020/463
[12] §10 Abs. 5 COVID-19SchuMaV 2020 BGBI II 2020/463

visitors per week were permitted to accompany them[13]. An exception was made for Christmas, as two visitors living in the same house were permitted to visit their relative twice. But with the start of the 3rd "*hard*" lockdown, visits were again restricted[14].

In hospitals, rules for visitors were the same as in nursing homes during the "light" lockdown[15]. In the 2nd "*hard*" lockdown one visit per patient and per week was permitted in specific cases, like at pregnancy visits or delivery, to accompany minors or patients highly dependent and at end-of-life care[16]. After Christmas (3rd "*hard"* lockdown), one visit per patient and per week was still permitted and additionally maximum two people per day could accompany minors, patients' highly dependent and one person to pregnant women to their regular control visits or delivery[17].

Figure 1 provides an overview of the measures during the second COVID-19 wave and the number of confirmed COVID-19 cases in Austria.

[13] §10 Abs. 1 Abs. 2 COVID-19- NotMV, BGBI II Nr. 479/2020
[14] 1 Art. 9 § Änderung der 3. COVID-19- SchuMaV und 2. COVID-19- NotMV, BGBI II Nr. 598/2020
[15] § 11 Abs. 1. COVID-19SchuMaV 2020 BGBI II 2020/463
[16] § 11 Abs 1. Abs 2. COVID-19-NotMV BGBI II Nr. 479/2020
[17] § 11 Abs. 1 Abs. 2. Änderung der 3. COVID-19-SchuMaV und 2. COVID-19-NotMV, BGBI II Nr. 598/2020

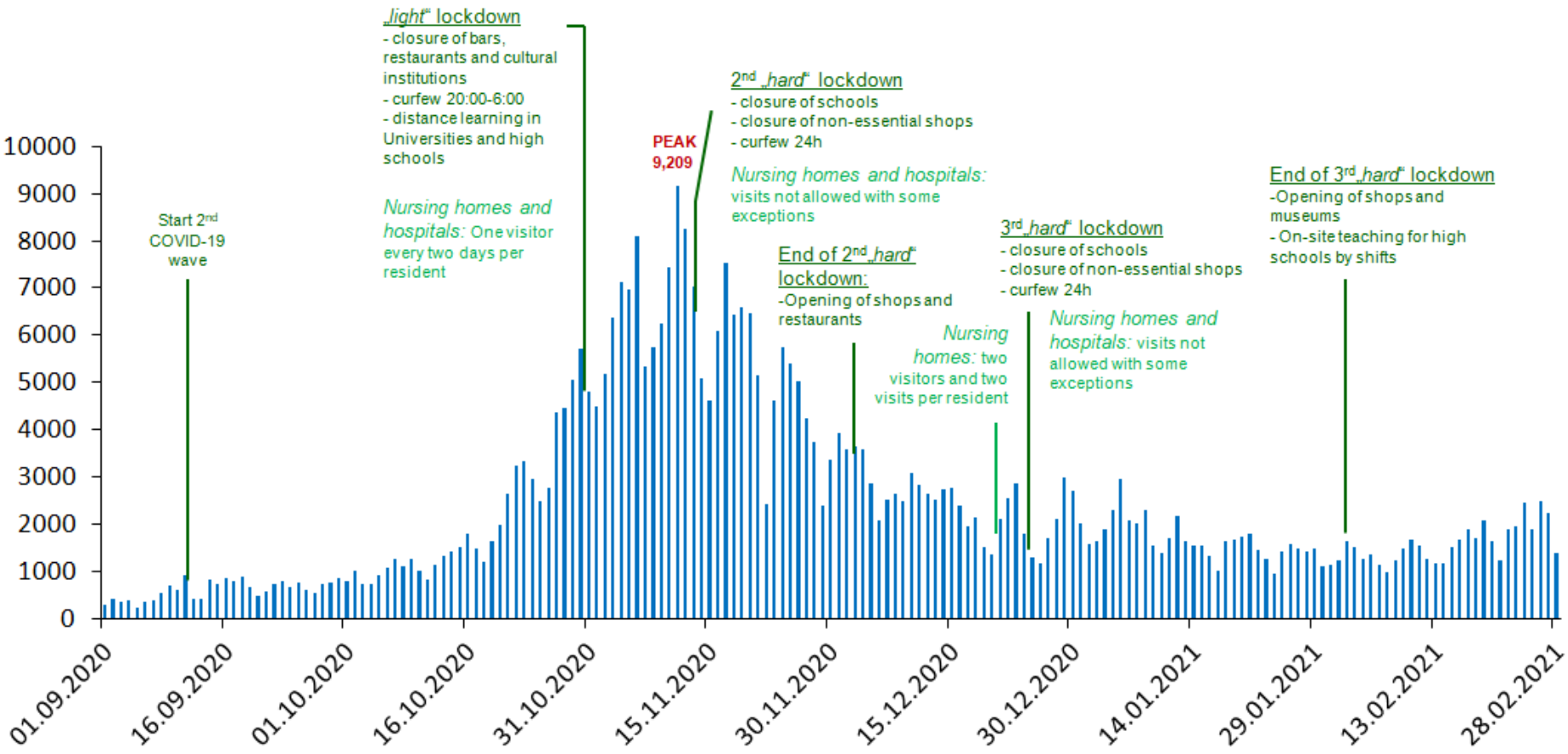

Figure 1 Number of new infections per day and timeline of main measures in Austria
(AGES, 2020a; Pollak, Kowarz and Partheymüller, 2021)

2 Literature search: Visitor restriction policies

A literature search was conducted between 10th of March and 15th of May to gain an insight in the international literature about visitor restriction policies during the COVID-19 pandemic.

Firstly, a search about visitor restriction policies in an internet search engine (Google®) was done to get a general overview about the topic. The keywords for this search were *"visitor restriction policies"*, "*COVID-19"*and *"Austria"*. Furthermore, information about visitor restriction policies was searched in specific websites, such as the World Health Organization (WHO) or in the website of Austrian government.

In a second step, a systematic literature research was carried out in the online databases PubMed®, CINAHL®, EMBASE and Cochrane Library. The following keywords were used: "Visitor* restriction policies", "Visitor* restriction polic*", "Visitor to patients", "Covid-19", "SARS-CoV-2", "Pandemic*".

The selection of the literature was carried out based on the article's topic, prioritizing the theme "visitor policies". Studies from all countries and done in all settings that analyzed which visitor restriction policies were implemented, were included. In addition, studies that analyzed regional differences in Austria during the first COVID-19 wave were also included. Studies that analyzed different topics with regards to visitor restriction policies, such as their consequences and/or impact on patients, families and healthcare professionals, and strategies and approaches to mitigate policies during the pandemic and ethical dilemmas that healthcare professionals had to face to, were excluded.

2.1 Results from the literature search

In total 341 Studies were found in the databases. After removing duplicates, 288 articles remained for screening. After title screening, 77 studies were included for abstract screening. 67 studies did not meet the inclusion criteria and were excluded (17 focused on the consequences and/or impact of visitor restriction policies, 10 studies on the perspective and experiences of family members, 7 studies on the ethical dilemmas, 12 studies on the different approaches to deal with visitor restriction policies and 21 studies did not provide relevant information with the searched topic). In total 10 studies were included. 8 studies described visitor restriction policies that were implemented in hospitals in different countries. All of them provided information regarding the number of visitors that were permitted (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Kitano *et al.*, 2020; Hsu *et al.*, 2020; Liu *et al.*, 2020; Weiner *et al.*, 2021; Yeh *et al.*, 2020). Two Studies described the frequency and duration of the visits (Liu *et al.*, 2020; Fiest *et al.*, 2021). Visitor's registration was documented in one study, namely from Liu et al, 2020. Visitor health checks were documented in three studies (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Liu *et al.*, 2020). In addition, 2 studies analyzed the regional differences in Austria during the COVID-19 pandemic (Hoedl, Bauer and Eglseer, 2020; Moshammer, Poteser and Weitensfelder, 2022). Table 1 provides an overview of the 10 included studies.

2.1.1 Maximum number of visitors

Fiest al al. described the situation regarding visitor policies in Canadian ICUs before (preCOVID) and during (midCOVID and lateCOVID) the first COVID-19 wave. They observed that before the pandemic 24/35 (69%) of ICUs were open 24 hours or with some exceptions 6/35 (17%). Although ICUs implemented visitor restriction policies during the pandemic (midCOVID: 61/71; 86%), these were loosened during the course of the pandemic (lateCOVID: 65/85; 76%). Policies did not permit visitors but exceptions were made. The authors did not register the number of visitors that were allowed. Nevertheless, hospitals began allowing a designated visitor (8/85; 9%), a limited number of visitors (4/85; 5%) or case-by-case basis (2/85; 2%) in lateCOVID (Fiest *et al.*, 2021).

An environmental scan carried out in 70 medical centres from North-America stated that the majority of centres had a visitor restriction policy. 12 centres (17%) did not have any exception with regards to visitor policies, 51 centres (73%) allowed one visitor and 7 centres (10%) did not provide any information on this matter (Harrison *et al.*, 2021).

A content analysis of 104 visitation policies from inpatient healthcare facilities in Pennsylvania showed that a minority (29; 27.9%) did not allow visitors and over two-thirds (70; 67.3%) allowed visitor exceptions. More than a half (37; 52.9%) were standardized and almost a quarter (16; 22.9%) offered case-by-case exceptions (Hart *et al.*, 2021).

A cross-sectional study described the visitor restriction policies that were implemented in 32 and 4 paediatric wards from USA and Canada, respectively. 34 (94%) wards changed visitor policies and visits were mainly restricted to one visitor (24; 67%) or two visitors (9; 25%) (Kitano *et al.*, 2020).

In the same time period a cross-sectional study described visitor restriction policies in 193 Taiwanese hospitals. The majority of ordinary wards permitted two visitors at one time (141; 73.1%). Few wards (40; 20.7%) allowed one visitor per time (Liu *et al.*, 2020).

Weiner et al. (2021) found out that visitor exceptions varied across the 13 hospitals in Michigan, USA they assessed. In end-of-life care, 4 hospitals had case-by-case exceptions, 3 allowed limited number of visitors, 1 allowed only one visitor and 5 did not have end-of-life exceptions. In paediatric units, 3 hospitals permitted two visitors, whereas 7 hospitals permitted only one visitor and two did not made exceptions. In adult inpatients 5 hospitals permitted visitors and 6 did not made exceptions (Weiner *et al.*, 2021).

One more study described visitor restriction policies in 50 Comprehensive Clinical Centres in USA (Yeh *et al.*, 2021). The authors distinguished between visitor restrictions for non-COVID and COVID inpatients, outpatients and end-of-life non-COVID/COVID inpatients. Visitors were prohibited for non-COVID inpatients (24; 48%), COVID inpatients 36 (72%). One visitor was permitted for non-COVID patients (22; 44%). Two or more visitors were permitted for non-COVID patients (4; 8%) (Yeh *et al.*, 2021).

2.1.2 Visit duration/ Frequency of visits

Fiest et al. (2021) found out that only few policies from Canadian hospitals described visiting times in a heterogeneous manner. One policy stated one visit per stay in hospital, 4 policies permitted one visit per day in hospital, two policies permitted one visit per day for one or two hours and six policies allowed one visit during the designated hours (Fiest *et al.*, 2021).

A cross-sectional study describes how many slots were allowed in 193 Taiwanese hospitals during the first COVID-19 wave (Liu *et al.*, 2020). The results showed that more than a half permitted two visiting slots per day (106; 54.9%) and over one third permitted one visiting slot per day 70 (36.3%) (Liu *et al.*, 2020).

Furthermore, Liu et al. (2020) collected information regarding visit duration. Close to a half of wards allowed visitors to stay 2 hours per day (91; 47.2%) and visiting time was from 1 hour per day in 55 wards (28.5%) (Liu *et al.*, 2020).

2.1.3 Visitor registration

Identity checks were implemented in 100 out of 193 (51.8%) analyzed hospitals in Taiwan (Liu *et al.*, 2020).

2.1.4 Visitor health checks

Health checks were carried out to avoid the entrance of unwell visitors wearing a mask (midCOVID: 58; 82%) in Canadian hospitals (Fiest *et al.*, 2021). Harrison et al, (2021) described that visitors health checks were carried out in American academic centres. The majority focused on COVID-19 symptoms 40/70 (57%) (Harrison *et al.*, 2021). With regards to visitor screening measures for infection control over two-thirds of Taiwanese wards checked body temperature (151; 78.2%), hand hygiene (122; 63.2%) and contact history (159; 82.4) (Liu *et al.*, 2020)

Table 1 provides an overview of the included studies.

Table 1 Overview of included studies

Author	Country	Study design	Setting	Data collection	Measurements
Fiest et al. (2021)	Canada	Environmental scan	Hospitals (Intensive Care Unit)	3 different time points: preCOVID (hospitals n=66; ICU[2] n=35) midCOVID (hospitals n=71; ICU[2] n=0) lateCOVID (hospitals n=82; ICU[2] n=3)	Type of policy (no visitors, structured, open), number of visitors allowed and visiting hours/times.
Harrison et al. (2021)	USA[1]	Environmental scan	70 Academic Medical Centres	Between August and October 2020	Number of visitors allowed, categories of restriction exceptions, details of how rules are operationalized, end-of-life policies, rules for visitors, accommodations for visitors (e.g., parking), and care team-to-family communication practices.
Hart et al. (2021)	USA[1] (Pennsylvania)	Mixed-methods study (qualitative content analysis of visitation policies)	513 Inpatient Healthcare Facilities	Between 30th April and 20th May 2020	Categories of restriction exceptions, restrictions on visitors' movement through the facility and mandatory screening (e.g., symptom checks) prior to entry.
Hsu et al. (2020)	Taiwan	Environmental scan	76 Hospitals	Between 16th and 25th March 2020.	Number of visitors allowed, daily number of visiting slots, number of hours open daily and requisites for hospice ward entry.
Kitano et al. (2020)	USA[1] and Canada	Cross-sectional	32 Paediatric Hospitals from USA[1] 4 Paediatric Hospitals from Canada	Between 29th of March and 12th of April 2020	Number of visitors allowed, categories of restriction exceptions, screening policies, the use of personal protective equipment (PPE) by visitors and rules for visitors
Liu et al. (2020)	Taiwan	Cross-sectional	193 Healthcare Facilities: Academic Medical Centre (n=17) Metropolitan Hospital (n=53) Local Community Hospital (n=123)	Between 15th and 18th of March 2020	Number of visitors at one time, number of visiting slots per day, visiting hours per day, visitor rules, number of different types of rules

Author	Country	Study design	Setting	Data collection	Measurements
Weiner et al. (2020)	USA[1] (Michigan)	Environmental scan	13 Hospitals	Between 15th and 19th of April 2020	Categories of restriction exceptions and number of visitors allowed
Yeh et al. (2021)	USA[1]	Observational	50 Comprehensive Clinical Centres	July 2020	Number of visitors allowed, categories of restriction exceptions
Hoedl et al. (2021)	Austria	Cross-sectional	Hospitals, Nursing Homes and Other Healthcare Facilities	May 2020	COVID-19 symptoms, testing and diagnose of COVID-19 among nursing staff
Moshammer et al. (2022)	Austria	Ecological study	Federal states from Austria	Between 8th of March and 23rd of April	Peak value and cumulative number of COVID-19 cases per district and cumulative number of COVID-19 deaths

[1] USA: United States of America

[2] ICU: Intensive Care Unit

2.2 Conclusion from literature search

From 10 studies, 2 studies focused on regional differences across Austria and 8 studies focused on which and how visitor policies were implemented. Most of them analyzed the visitor policies that were available on the webpage of hospitals (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hsu *et al.*, 2020; Weiner *et al.*, 2021). A few of them carried out a survey (Kitano *et al.*, 2020; Liu *et al.*, 2020; Yeh *et al.*, 2021).

All studies mention the number of visitors that were allowed despite restricted visits and in which field they were allowed (e.g. end-of-life, paediatric setting, maternity setting). A few of them gave more information related to the timing and frequency of the visits and the screening health checks of visitors (Fiest *et al.*, 2021; Liu *et al.*, 2020). Moreover, some studies described the use of personal protective equipment by visitors (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Kitano *et al.*, 2020) and clarified the way policies were communicated and the individual's perceptions of the facility (Hart *et al.*, 2021; Harrison *et al.*, 2021). The reasons why visitor restriction policies were also described in some studies (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hsu *et al.*, 2020; Hart *et al.*, 2021).

In general, studies conclude that visitor restriction policies varied across healthcare facilities. One study found out that there was no congruence with regards to visitor policies between centres in close geographic proximity (Yeh *et al.*, 2021).

3 Consequences of visitor restriction policies

Since the beginning of the pandemic in March 2020 internationally medical institutions implemented measures to reduce the spread of SARS-CoV-2. One of the measures was to reduce social contact and therefore medical wards implemented visitor restriction policies that affected all patients, despite the fact whether they were infected or not (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Kitano *et al.*, 2020; Hsu *et al.*, 2020; Liu *et al.*, 2020; Weiner *et al.*, 2021; Yeh *et al.*, 2020)).

The literature search showed that the majority of studies analyzed the impact and/or consequences that visitor restriction policies had on patients, families and healthcare professionals in different settings. They pointed out that restricting visits increases levels of stress and anxiety of families due to uncertainty; delays the total recovery of the patient,

increases depression symptoms, agitation and aggression and reduces cognitive function in residents; affects the bounding between child and parents, etc. (Hugelius, Harada and Marutani, 2021; Iness *et al.*, 2022; Moss *et al.*, 2021; Wendlandt, Kime and Carson, 2022; Zeh *et al.*, 2020).

There were several studies that approached the experiences and perspectives of the patients and their relatives in this context (Honingh *et al.*, 2021; Wammes *et al.*, 2020; Breman *et al.*, 2021). Moreover, some studies proposed different strategies and tools to improve Family-Centered Care (FCC) and reduce burdens that caused visitor restriction policies (Fernandes *et al.*, 2022; Jensen *et al.*, 2022; Kuntz *et al.*, 2020). In addition, few studies pointed out the ethical dilemmas that healthcare professionals had to deal with, while implementing visitor restrictions policies (Bardon, 2021; Sizoo *et al.*, 2020).

4 Research gap and aim

In Austria the government implemented several measures to reduce the transmission of SARS-CoV-2. As Austria is a federal country, each federal state adapted these general regulations to their region (Parliament, 2021). So, during the COVID-19 pandemic different regulations could be valid in the federal states, which were adapted according to the epidemiological situation (BMSGPK, 2020b).

On this basis, two studies described regional differences with regards to SARS-CoV-2 occurrence in nursing staff (Hoedl, Bauer and Eglseer, 2020) and to socio-demographic and socio-political factors (Moshammer, Poteser and Weitensfelder, 2022). However, there was not found any published study that described the differences between region and setting with regard to visitor restriction policies in Austria.

Due to the COVID-19 pandemic visitor restriction policies were implemented to control the spread out of SARS-CoV-2 and to guarantee public health. However, the presence of family members have a positive impact on patient's empowerment, family member's confidence and healthcare professional's job satisfaction (Park *et al.*, 2018).

Therefore, the aim of this master thesis is to describe the management of visitors during the second COVID-19 wave in different regions and healthcare facilities in Austria.

The following research question will be answered:

- What are differences between regions and settings with regard to visitor policies in Austria during the second COVID-19 wave?

5 Method

The Institute for Nursing Science of Medical University of Graz designed and conducted several research projects during the COVID-19 pandemic in different settings. One of them was the SCIENCE study (**N**ursing **C**are dur**I**ng the s**E**co**N**d **COVID**-19 wav**E**), which has led to scientific publications (Hoedl, Eglseer and Bauer, 2021; Hoedl, Bauer and Eglseer, 2021; Schoberer et al, 2022).

5.1 Study design

The SCIENCE study was a cross-sectional study. This kind of study design collects data in a specific period of time from a specific population and it is adequate to describe and associate phenomenon (Polit and Tatano Beck, 2004). The study was conducted online via LimeSurvey due to the pandemic.

5.2 Sampling strategy and study sample

The sample size was calculated using a sample size calculator called Qualtrics. Based on data available from the Austria and Federal Ministry for social Affairs Health Care and Consumer Protection, the power calculation by Qualtrics identified an ideal sample size of 383 frontline nursing staff.

The sampling method chosen was snowball sampling to recruit a high number of participants. In addition, the online questionnaire was available in various social media from nurse researches as well as on the Medical University Graz's Homepage.

The study sample consisted of registered nurses that were working at the frontline during the COVID-19 wave in different settings of Austria. Moreover, nursing aids, nursing students and specialized social carers were also included in the study as nurses can delegate tasks to them. As the main goal of the study was to gain an insight to the frontline during the second COVID-19 wave, nurse managers and supervisors were excluded from the study.

5.3 Data collection

Data were collected between 12th November 2020 and 2nd March 2021. During this time period the link to the online questionnaire was available on the homepage of Medical

University of Graz as well as in various social media that belonged to nurse researchers from Institute of Nursing Science in Graz.

The online standardized questionnaire consisted on 31 questions that covered several topics, like the availability and use of personal protective equipment, level of stress by using the German version of the "Perceived Stress Scale" (PSS) and work load of participants, the protective measures that were implemented (e.g COVID-19 tests) and the information/management of visitors. The questions were dichotomous, choice and Likert scale questions. The last question of the questionnaire was an open question. For this master thesis only those questions that focused on the information/management of visitors were analyzed.

Data on sample characteristics such as gender and age was collected. Moreover, participants were asked in which federal state and what kind of healthcare facility they were working in, the kind of job qualification and the years of nursing experience they had.

There were four questions that collected information regarding the visitor restriction policies. The first question asked about which visitor restriction policies were implemented in participant's setting. The second question pointed out the clarity regarding what information should be provided to visitors. The third question collected information concerning the responsible person for visitor restriction policies. The fourth question was only available for those participants that were responsible for implementing visitor restriction policies. This question collected information about the organizational measures that the participant implemented with regards to visitor restriction policies.

5.4 Data analysis

To analyze data on Austrian regions Austrian federal states were divided using the NUTS system. NUTS is the abbreviation for *"Nomenclature of territorial units for statistics"* (Eurostat, 2021a). This European system organizes territorial units in units to make comparable statistical data at regional level.

European Union territory can be divided in three units (Eurostat, 2021a):

- NUTS 1 regions of the European Communities
- NUTS 2 Basic administrative units
- NUTS 3 subdivisions of the basic administrative units

According to NUTS 1 Austria is divided into three units (Eurostat, 2021b):

- Eastern Austria (Burgenland, Lower Austria, Vienna),
- Southern Austria (Carinthia and Styria)
- Western Austria (Upper Austria, Salzburg, Tyrol, Vorarlberg)

The number of participants varied depending on the setting. While there were many participants that worked in hospitals and in nursing homes, the number of nursing staff working in primary care, rehabilitation, healthcare facilities for people with disabilities and mobile home-care was considerable smaller. As a result, the settings were clustered in three groups: hospital, nursing home and other healthcare facilities.

In addition, although the participants had different job qualifications, this was not taken into account during data analysis. This was decided because participant's job qualification does not play a role to answer the research question.

SPSS version 26 was used for data analysis (IBM Corp. Released, 2019). To investigate associations between regions/settings and visitors restriction policies statistical test chi-square test was used. P value of <0.05 was considered as statistically significant.

5.5 Ethics

This study was conducted in agreement with the declaration of Helsinki and the Guidelines on Good Clinical Practice (GCP). The questionnaire was approved by the Medical University of Graz Ethical Committee (33-118 ex 20/21). All participants were informed about the study on the first page of the questionnaire and were asked to give their written informed consent in the first question of the online questionnaire, according to the European General Data Protection Regulation, paragraph 32). All collected data were anonymized, and IP addresses were not stored.

6 Results

In total, 2,008 people participated in the online questionnaire. 1,670 questionnaires were fully completed and therefore included in the analysis.

6.1 Sample characteristics

The majority of the participants were female (n = 1393; 83.4%), whereas almost a sixth were male (n=277; 16.6%). The mean age of the participants was 38.0 years (SD 10.0).

Most of the participants were registered nurses (n=1387; 83.1%). Nursing aids, nursing students and specialized social carers participated in less proportion, as Figure 2 shows.

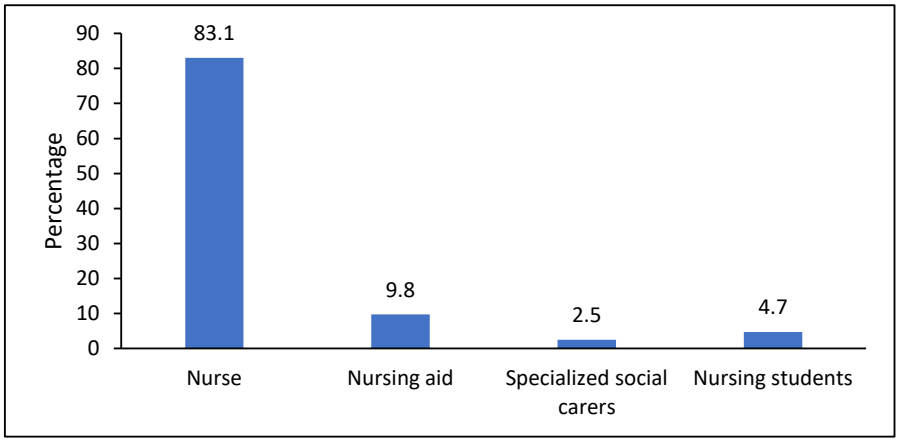

Figure 2 Participant distribution by professional qualification

As shown in Figure 3, about a third of participants (n=526; 31.5%) had worked more than 20 years, whilst the group with <5 years of job experience registered the lowest number of participants (n=353; 21.1%).

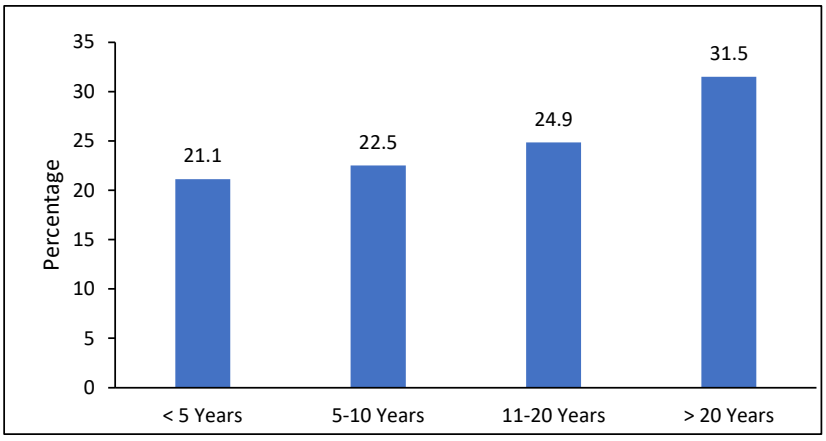

Figure 3 Participant's job experience

Data from all Austrian federal states were collected. The number of participants varied between federal states. As in Figure 4 presented, Styria registered the highest number of participants (n=601; 36%) followed by Upper Austria (n=273; 16.3%) and Vienna (n=241; 14.4%). On the contrary, the lowest number of participants was registered in Salzburg (n= 41; 2.5%) followed by Carinthia (n=67; 4%) and Burgenland (n=75; 4.5%).

For data analysis, federal states were grouped according to NUTS System. Participant's distribution among regions is illustrated in Figure 5. Southern Austria was the region with more participants (n=668; 40%), followed by Western Austria (n=551; 33%) and by Eastern Austria (n=451; 27%).

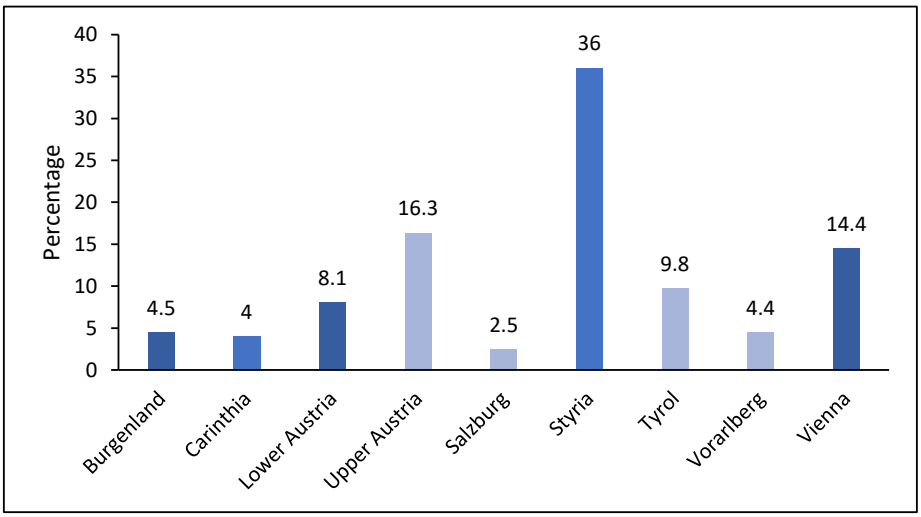

Figure 4 Participants in each Austrian federal state

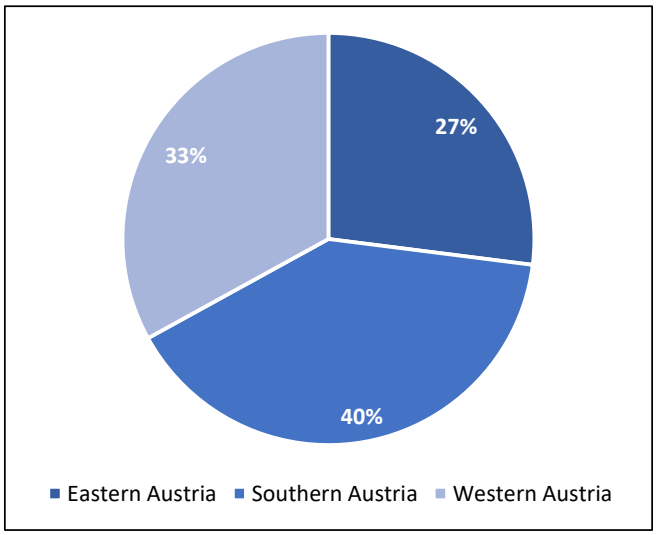

Figure 5 Participant distribution by Austrian region

The online questionnaire was distributed in different healthcare facilities. Figure 6 shows the distribution of participants in hospitals, nursing homes, rehabilitation facilities,

healthcare facilities for people with disabilities, home care, primary care as well as in other settings and Figure 7 shows the proportions of participants in the grouped settings. The vast majority of participants were working in hospitals (n=1209; 72.4%). Almost one fifth of participants were working in nursing homes (n=331; 19.8%) participants. In less proportion the questionnaire was filled out by healthcare professionals working in other healthcare facilities (n=130; 7.8%), namely rehabilitation facilities, healthcare facilities for people with disabilities, primary healthcare and mobile healthcare teams.

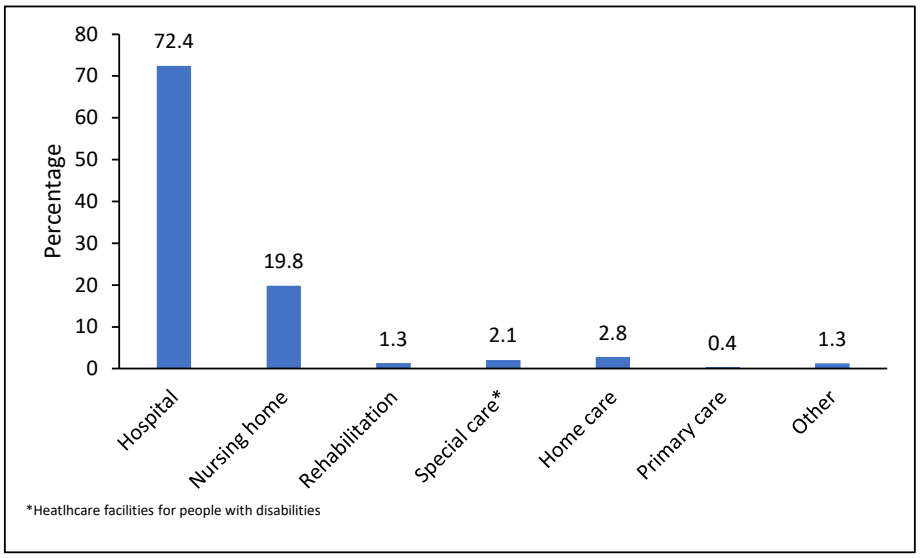

Figure 6 Distribution of participants according to setting

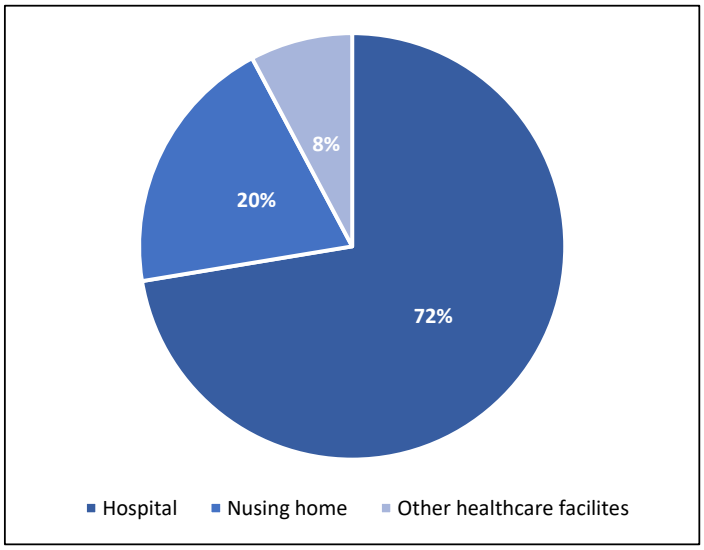

Figure 7 Distribution of participants by setting groups

6.2 Visitor restriction policies

Visitor restriction policies that participants performed are presented in Figure 8.

The main policies that were implemented in hospitals, nursing homes and other settings, were the control of visits (n=1389; 83.2%), the limitation of the number of visitors (n=1367; 81.9%), the control of visit duration (n=1330; 79.6%) and the control of the frequency of visits (n=1285 76.9%).

On the other hand, the location where the visits took place was the least performed measure (n=736; 44.1%).

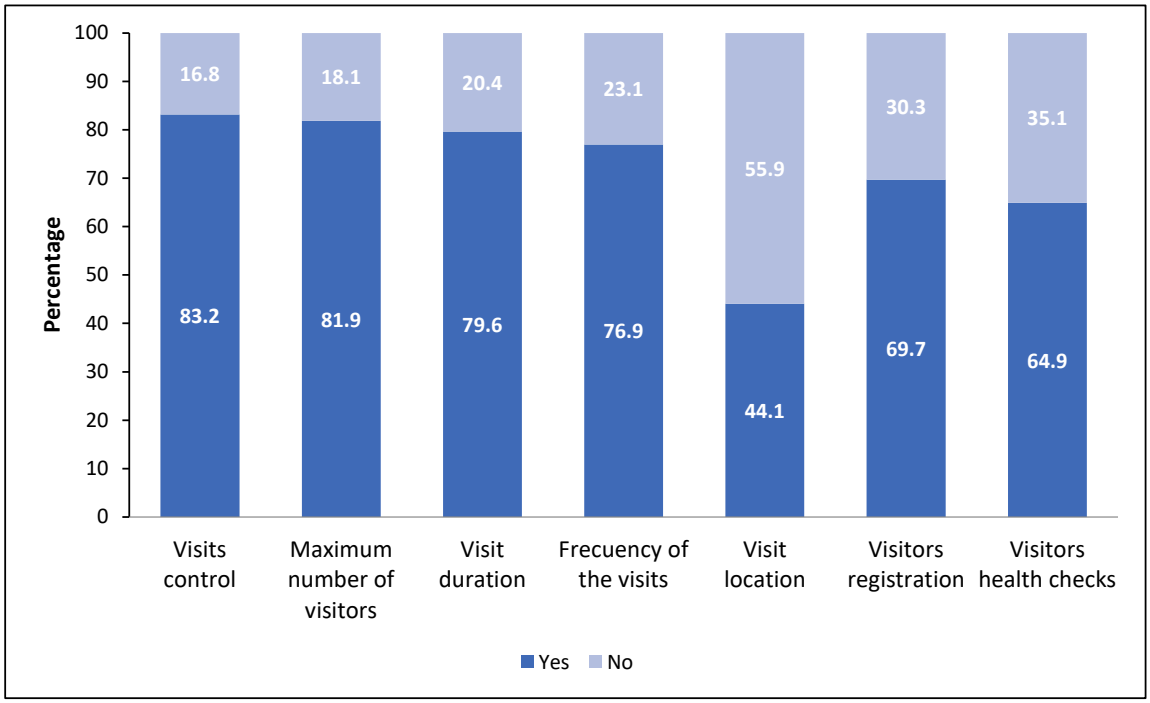

Figure 8 Overview of visitor restriction policies

6.2.1 Visitor restriction policies and regions

There were statistically significant differences between regions with regards to the maximum number of visitors, the duration and frequency of visits, visitor registration and visitor health checks (Figure 9).

Western Austria healthcare institutions registered the highest percentage with regards to the limitation of the number of visitors (n=477; 86.6%), whereas Southern Austria institutions registered the lowest percentage (n=510; 76.3%). The difference between Western and Southern Austria institutions was ~~of~~ more than 10 percentage and statistically significant (p value = 0.000). Concerning the frequency of the visits, there was also a statistically significant difference between Western Austria healthcare institutions (n=454; 82.4%) and Southern Austria institutions (n= 484; 72.5%) (p value = 0.013).

Regarding visitors registration, Southern Austria healthcare institutions registered the highest percentage (n= 505; 75.6%), whereas Eastern and Western Austria institutions presented almost the same percentages, namely 65.6% and 65.9% respectively. The difference between Eastern and Western Austria institutions was statistically significant (p value = 0.000). Concerning the visitor health checks, Western Austria healthcare institutions registered the highest percentage (n= 375; 68.1%), while Southern Austria institutions the lowest (n= 264; 58.5%) (p value = 0.002).

From Figure 9, it can be highlighted that in percentage terms more visitor restriction measures were registered in Western Austria healthcare institutions than in the other two regions.

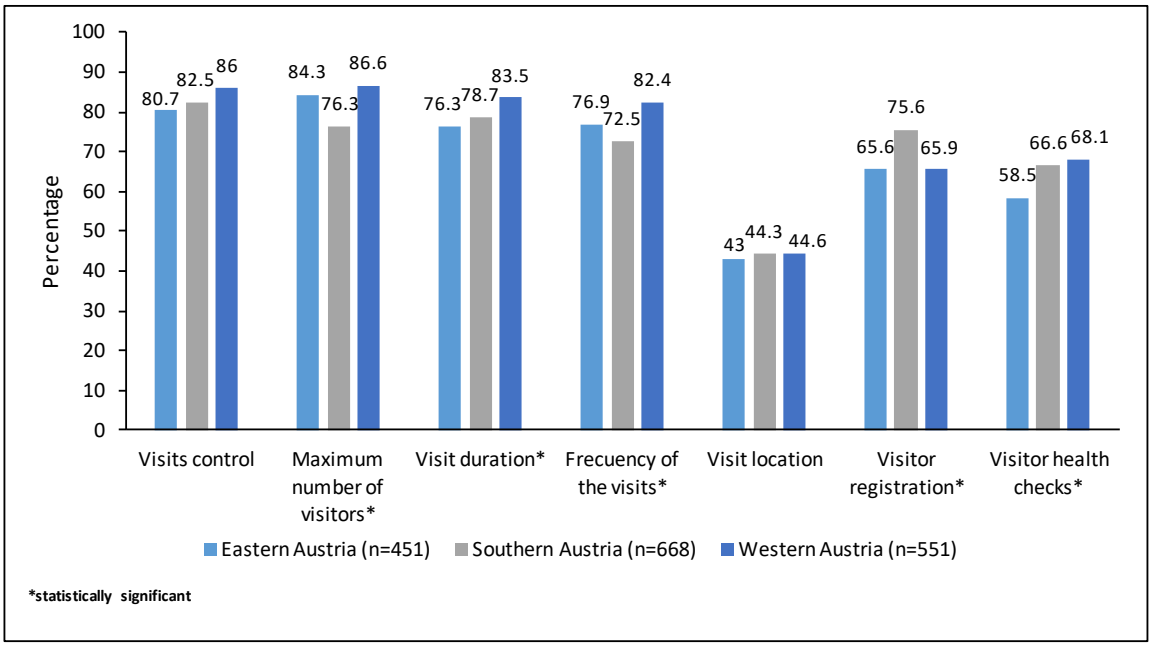

Figure 9 Overview of performed visitor restriction policies in Austrian regions

6.2.2 Visitor restriction policies and settings

The findings showed statistically significant differences between visitor restriction policies and settings (Figure 10).

The setting that registered more performed visitor restriction policies was overall nursing homes, having over 80% of positive answers in all questions according to policies. It is notable the pronounced difference with regards to the restriction according to the place of the visit between nursing homes (n=286; 86.4%) and the other two settings, namely hospital (n=391; 32.3%) and other healthcare facilities (n=59; 45.4%).

In hospitals, many visitor restriction policies were also performed. The results show that hospitals focused on the policies related to the restriction of visits as well as the number of visitors that were permitted and the duration and frequency of visits. Over 70% of the answers concerning the above-mentioned policies were positive. Other healthcare facilities registered around 50% of positive answers concerning the performance of visitor restriction policies.

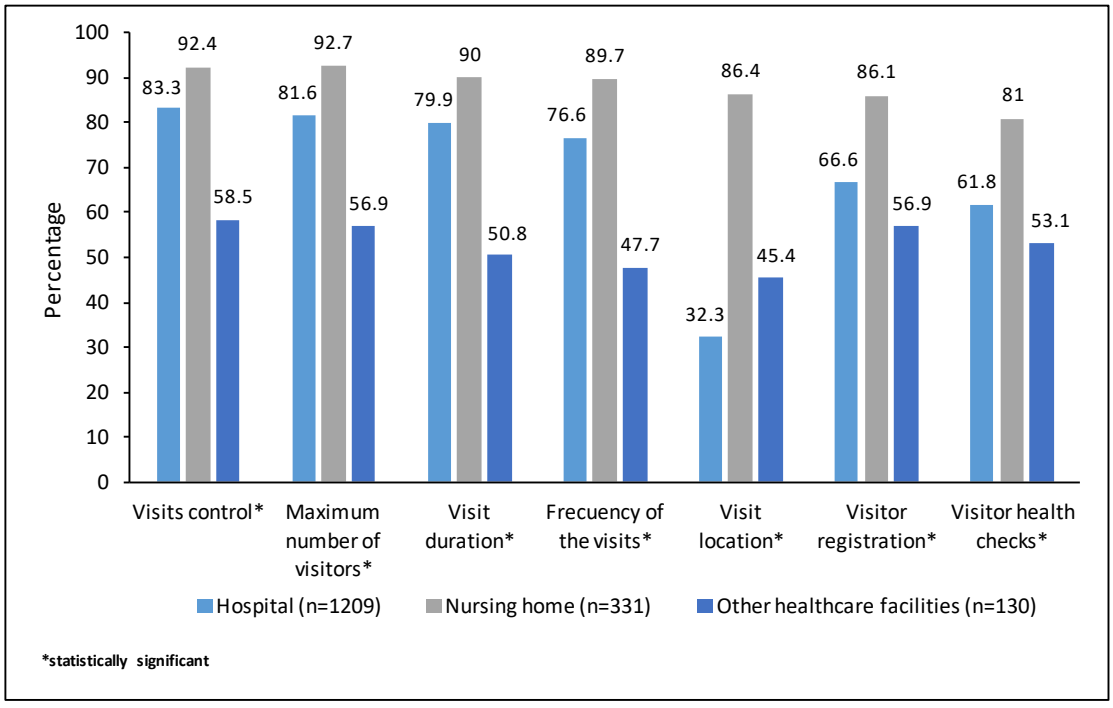

Figure 10 Overview of performed visitor restriction policies in settings

6.3 Information sharing

Participants were asked whether rules with regard to information sharing to visitors were clear or not. 985 (59%) participants found that rules were clear. In general, around 40% of the participants in each region found that the rules with regards to the information that should be given to visitors were not clear. There were slightly differences between regions that were not statistically significant (p value = 0.214) (Figure 11).

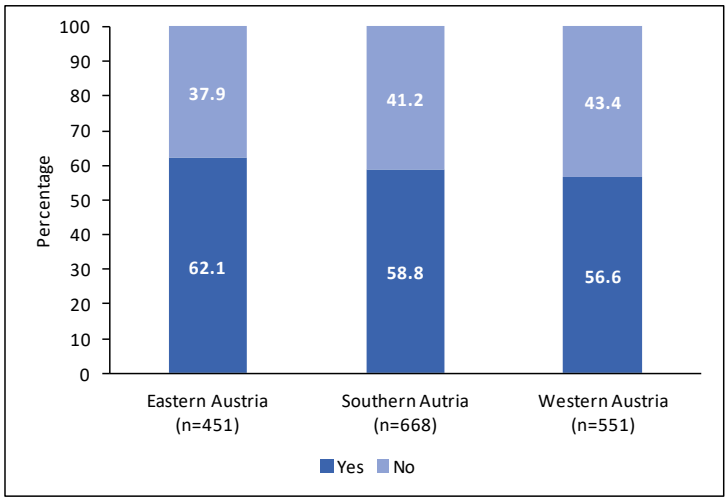

Figure 11 Overview of clarity of information sharing in Austrian regions

The highest number of participants that found that rules were not clear was registered in hospitals (n=532; 44%). On the other hand, nursing home registered the lowest percentage (n=109; 32.9%). Figure 12 shows, there were statistically significant differences between settings and information sharing.

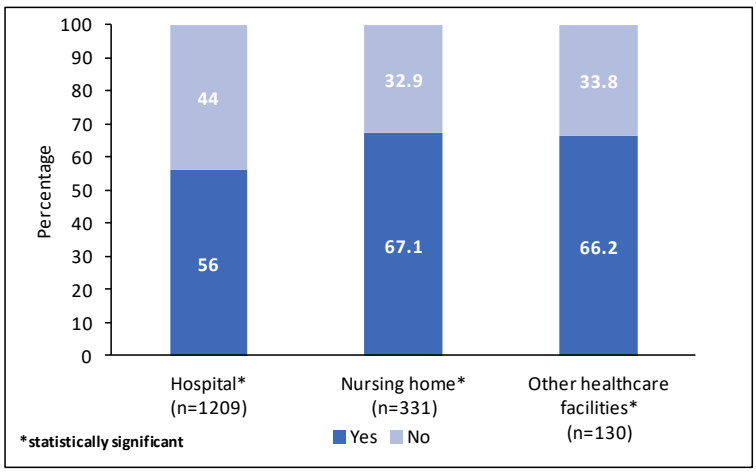

Figure 12 Overview of information sharing in settings

6.4 Responsible person for visitor restriction policies

Generally, nurses in management positions were usually responsible for visitor restriction policies (n=1143; 68.4%), as Figure 13 shows. Moreover, 795 (47.5%) participants answered that they themselves were the responsible person for visitor restriction policies. In this case, the majority of participants that were responsible for visitor restriction policies, were nurses (n=725; 91.4%). In addition, when the responsible person for visitor restriction policies, was a participant's workmate, the task was usually performed by other nurse (n=594; 82.2%).

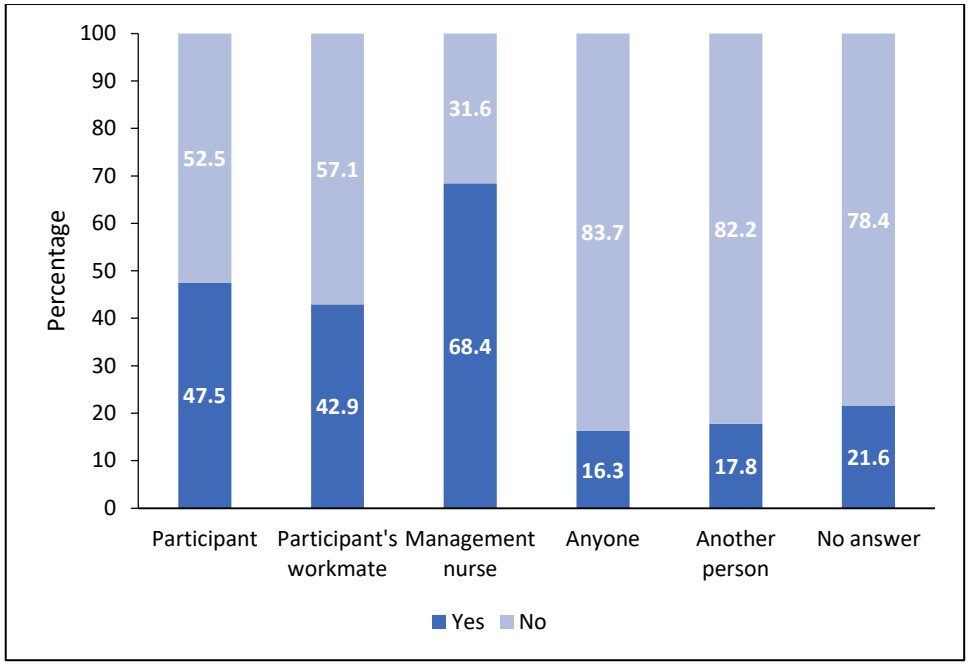

Figure 13 Overview of responsible person

6.4.1 Responsible person for visitor restriction policies and regions

The results showed statistically significant differences between the responsible person for visitor restriction policies and the regions (Figure 14). Southern Austria healthcare institutions had the highest percentage when the participant, usually a registered nurse, was the responsible person for visitor restriction policies (n=339; 50.7%), whereas Eastern Austria institutions had the lowest percentage (n=189; 41.9%). This difference was statistically significant (p value = 0.014)

The responsible person was a participant's workmate more frequently in Southern Austria healthcare institutions (n=322; 48.2%), whilst Eastern and Western Austria registered a similar percentage (39.2%; 39.6%). This difference was statistically significant (p value = 0.002).

Eastern Austria healthcare institutions registered the highest percentage of participants that answered that anyone was responsible for visitor restriction policies (n=91; 20.2%). The lowest percentage was registered in Western Austria institutions (n=76; 13.8%). This difference was statistically significant (p value = 0.022).

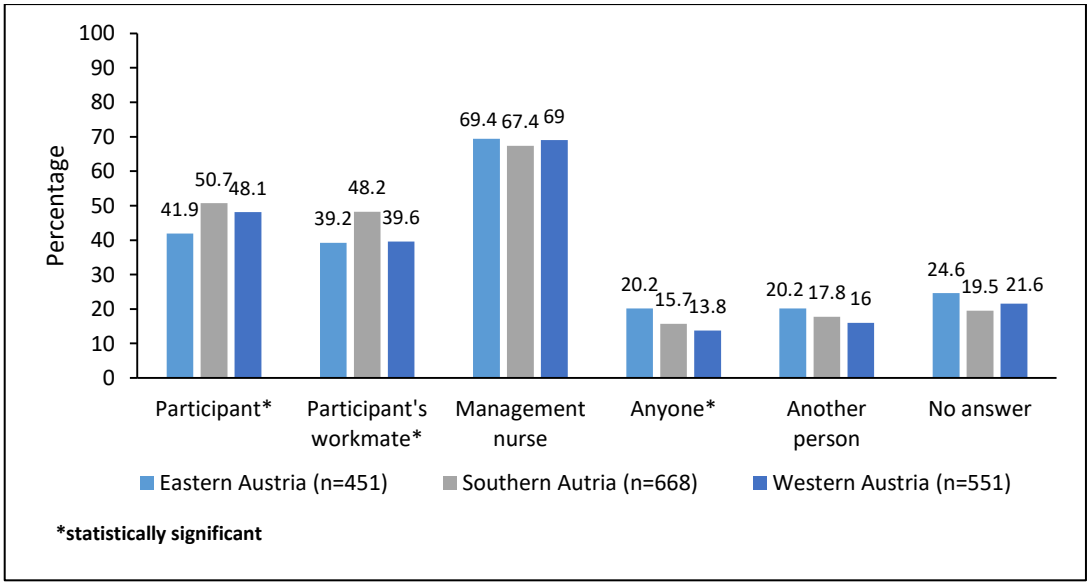

Figure 14 Overview of responsible person for visitor restriction policies in Austrian regions

6.4.2 Responsible person for visitor restriction policies and settings

The results showed statistically significances between the responsible person and the settings (Figure 15). Nurses in management positions were mostly the responsible person in nursing homes, having the highest percentage (n=309; 93.4%). This high percentage value contrasts with the results in hospitals (n=733; 60.6%). In addition, 86 (26%) participants reported that there was not a responsible person for visitor restriction policies in nursing homes. While in hospitals this percentage was lower (n=165; 13.6%).

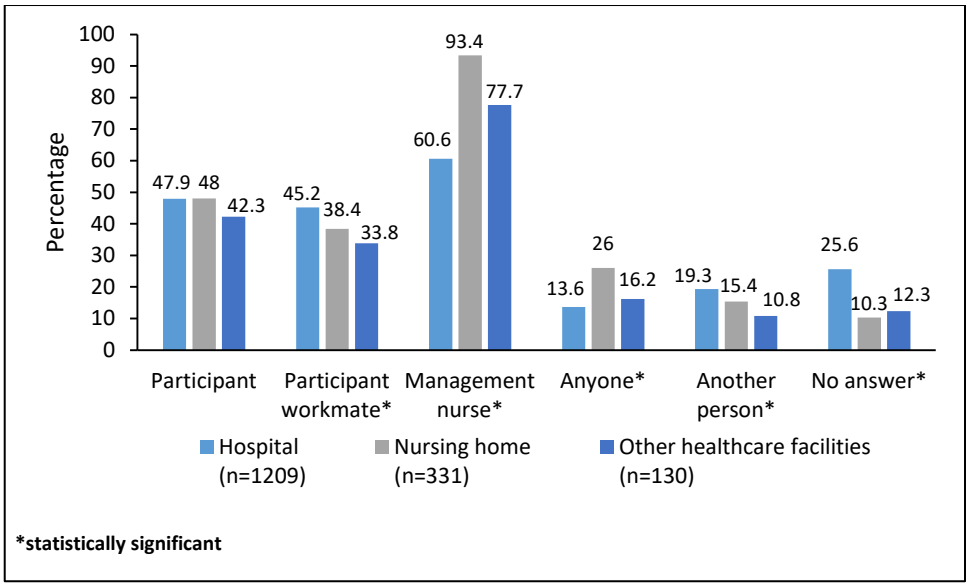

Figure 15 Responsible person for visitor restriction policies in settings

6.5 Organizational measures

Organizational measures were conducted to guarantee the implementation of visitor restriction policies. If the respondent was the responsible person for visitor restriction policies, he/she was asked to answer which organizational measures were conducted. From 793 (47.5%) participants, 787 participants answered to this optional question.

An overview of the performed organizational measures is presented in Figure 16. The most implemented organizational measure was the check the correct use of masks (n= 573; 72.8%). Obligatory registration for visitors (n=549; 69.8%) and the performance of health checks for visitors (n=458; 58.2%) were also performed in a higher proportion than other organizational measures. On the other hand, the least implemented organizational measure was to check negative test results of visitors (n=91; 11.6%).

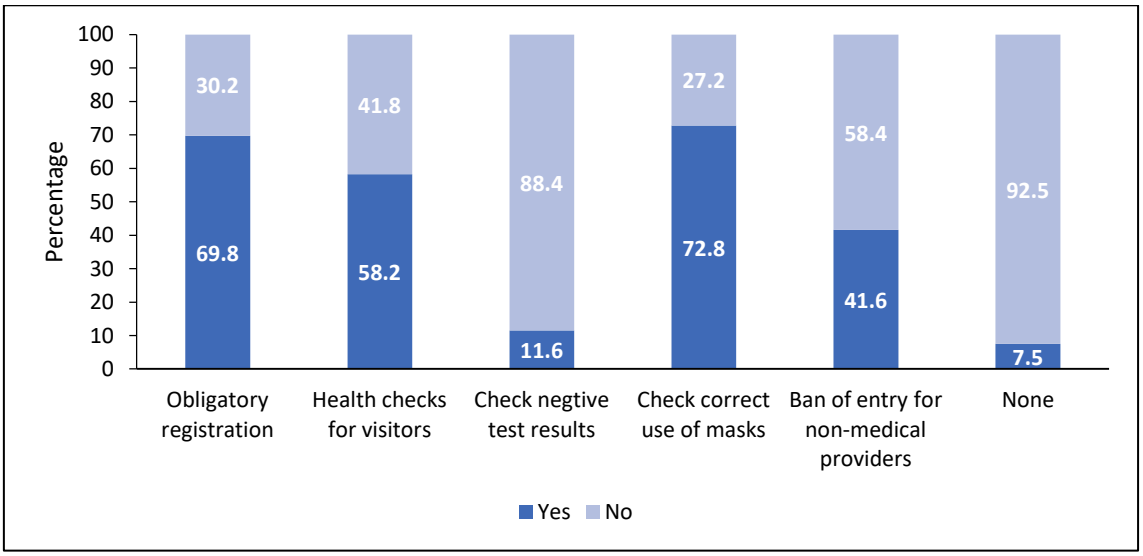

Figure 16 Overview of organizational measures

6.5.1 Organizational measures and regions

The results showed statistically significant differences between regions and two organizational measures, namely the obligatory registration and the check of negative test results (Figure 17). Obligatory registration registered the highest percentage in Southern Austria healthcare institutions (n=265; 78.4%), whereas Eastern and Western Austria institutions registered almost same percentage values, 63% (n=119) and, 63.5% (n= 165) respectively. This difference over 10 percent between regions was statistically significant (p value = 0.000). Furthermore, the check of negative test results registered the double of results in percentage in Eastern Austria healthcare institutions (n=31; 16.4%) compared to Western Austria institutions (n=21; 8.1%). This difference was statistically significant (p value = 0.023).

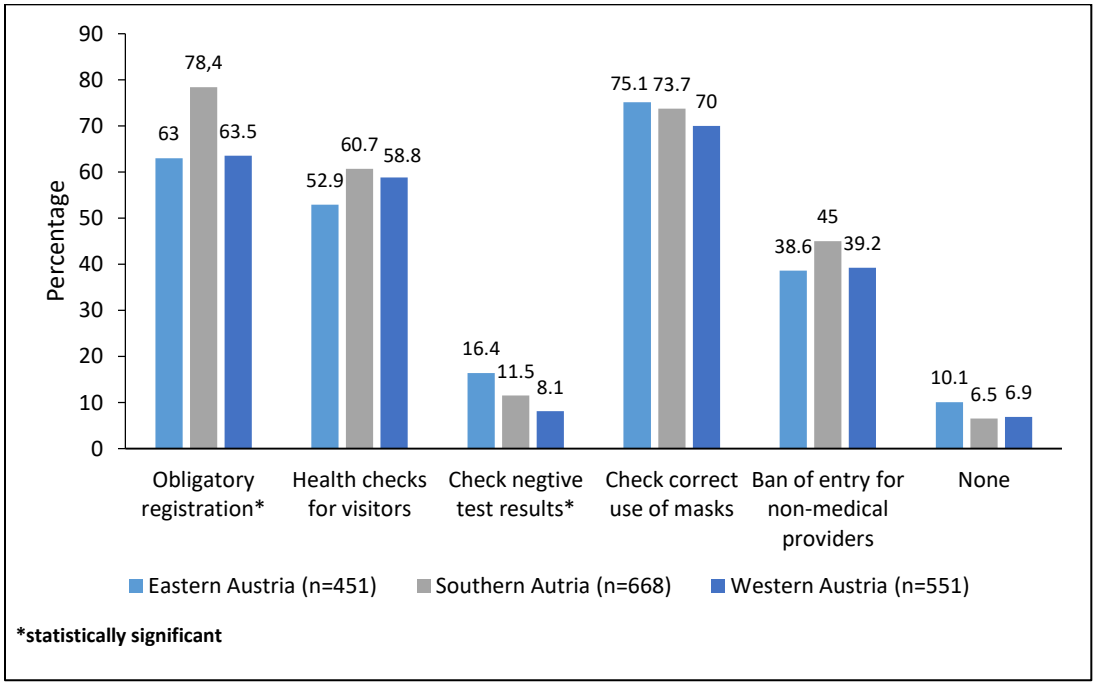

Figure 17 Overview of performed organizational measures in Austrian regions

6.5.2 Organizational measures and settings

Nursing homes registered overall more implemented organizational measures than hospitals and other healthcare facilities (Figure 18). Obligatory registration registered the most pronounced difference between settings. Whereas the highest percentage was registered in nursing homes (n=143; 95.5%), in hospitals was the percentage value considerable lower (n=373; 64.9%).

The implementation of check of negative test results also registered a pronounced difference between hospital (n=46; 8%) and nursing home (n=36; 22.8%) In addition, the difference with regards to the absence of organizational measures between other healthcare facilities (n=10; 18.5%) and hospital/nursing home (n=38, 6.6%; n=11, 7.0%) was significant.

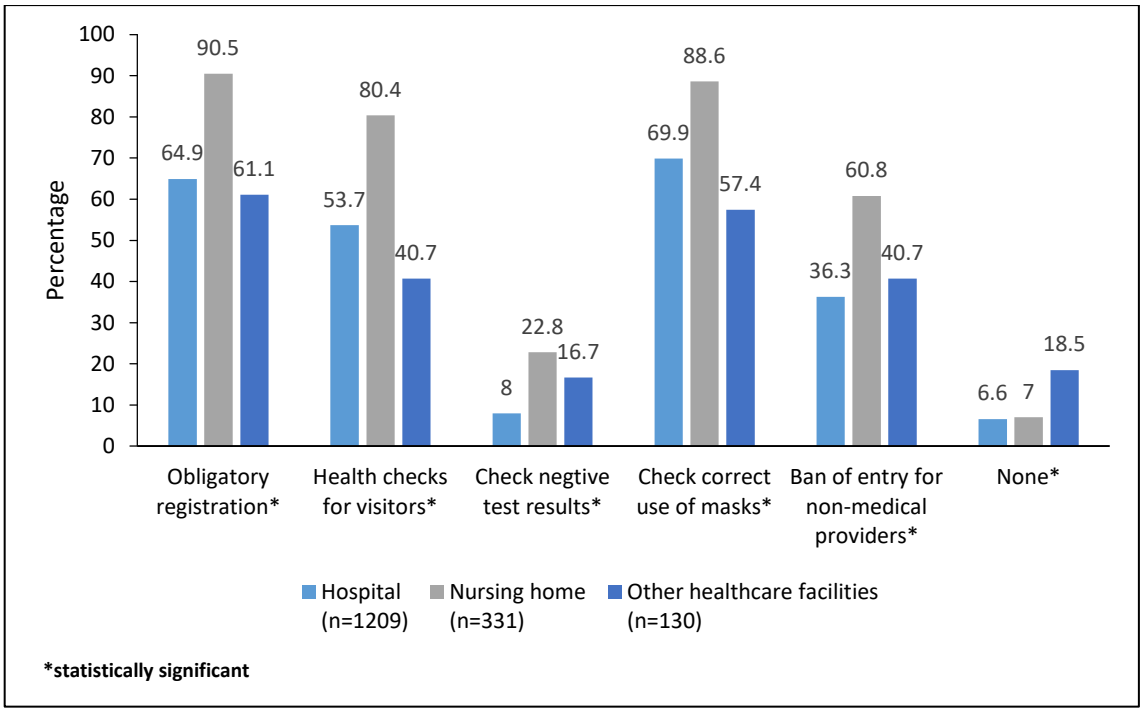

Figure 18 Overview of performed organizational measures in settings

7 Discussion

The SCIENCE study conducted by nurse researchers from the Institute of Nursing in Graz focused on four main key topics, namely personal protective equipment, testing, information/management of visitors work load combined with nurses stress level as well as the new legal binding measures.

This master thesis focused on the questions that collected data regarding the information and management of visitors. Austrian federal states adapted the main regulations to its region and to the different healthcare facilities during the second COVID-19 wave. Therefore, the aim of this master thesis is to describe the differences between regions and healthcare facilities with regards to visitor restriction policies in Austria.

7.1 Visitor restriction policies

The results show statistically significant differences between regions and some of the conducted visitor restriction policies, namely in the control of the number of visitors and frequency and duration of visitor restriction policies.

The region that registered a higher percentage in the performance of these policies was Western Austria, followed by Eastern Austria and Southern Austria respectively. One reason for this regional difference could be the epidemiological situation in the three different regions. Western Austria registered as of 27 November 2020 a higher number of occupied intensive care beds with COVID-19 cases than the other two regions (AGES, 2020b). Moreover, a COVID-19 prevalence study showed that between 12th and 14th of November the prevalence rate among the population was higher in Western Austria than in Eastern Austria (BMBWF, 2020).

With regards to setting differences, in terms of percentages, nursing home was the setting that clearly registered the highest percentages in the performance of all visitor restriction policies, being this over 80%. Although literature was found, that describes implemented visitor restriction policies in hospital settings (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Kitano *et al.*, 2020; Hsu *et al.*, 2020; Liu *et al.*, 2020; Weiner *et al.*, 2021; Yeh *et al.*, 2020), little data on the situation in nursing homes could be found. Indeed, only articles focused on innovative measures and strategies, like environmental management, testing and digital health, that were implemented in nursing homes were found (Lyng *et al.*, 2021; Dykgraaf *et al.*, 2021).

The findings report that in hospitals the most performed visitor restriction policies were the limitation of the number of visitors as well as the control of the duration and the frequency of visits. International literature show similar results with regards to visitor restriction policies in other countries. All identified articles reported that medical wards from USA, Canada and Taiwan implemented visitor restriction policies during the pandemic (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Hsu *et al.*, 2020; Kitano *et al.*, 2020; Liu *et al.*, 2020; Weiner *et al.*, 2021; Yeh *et al.*, 2021). Exceptions to visitor restrictions were in all cases made and a limited number of visitors were permitted in all wards of the respective country-specific reports (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Hsu *et al.*, 2020; Kitano *et al.*, 2020; Liu *et al.*, 2020; Weiner *et al.*, 2021; Yeh *et al.*, 2021). End-of-Life care, paediatric area and maternity area were usually the areas where exceptions were made (Fiest *et al.*, 2021; Harrison *et al.*, 2021; Hart *et al.*, 2021; Weiner *et al.*, 2021; Yeh *et al.*, 2021). In Canadian wards the number of visitors allowed increased to two in End-of-life (Fiest *et al.*, 2021) and in American wards were usually two visitors in End-of-life care allowed (Yeh *et al.*, 2021). In other settings, the details to exceptions to visits were not stated, like in American wards (Harrison *et al.*, 2021; Hart *et al.*, 2021;) or varied across wards in Michigan (Weiner *et al.*, 2021). Furthermre, some articles pointed out the lack of a universal definition of End-of-life care across Canadian wards (Fiest *et al.*, 2021) as well as across American wards (Harrison *et al.*, 2021; Weiner *et al.*, 2021). Concerning the frequency of visits, it was limited but there was not a unified procedure across Taiwan and Canada, the most usual policy being to allow one visit per day and/or per stay at hospital (Fiest *et al.*, 2021; Liu *et al.*, 2020). Regarding the duration of the visit, only one article from ordinary wards in Taiwan described the visiting hours per day that visitors were allowed to be with their relatives (Liu *et al.*, 2020). Almost a half of wards allowed 2 visiting hours per day (47.2%) (Liu *et al.*, 2020) .

7.2 Information sharing

There were no statistically significant differences in this study between regions and the rules concerning the information that should be given to visitors. This indicates that rules were the same in all regions as well as the communication barriers. Indeed, the basic measures to prevent the transmission and protect from SARS-CoV-2 were overall the

same, namely – hand hygiene, keep 2 meters of physical distance, regular natural ventilation and the use of PPE (BMSGPK, 2020b).

The use of personal protective equipment (PPE) is vital while caring for COVID-19 and non COVID-19 patients (WHO, 2020a). PPE avoid nosocomial infections, protect health of healthcare staff while on duty and therefore ensures that essential healthcare services continue. However, the use of medical masks by healthcare staff and visitors, even if physical distancing is maintained, complicates not only patient-nurse-visitor interaction but also the communication among nursing team and with interdisciplinary teams (Sugg *et al.*, 2022). Moreover, communication within nursing teams is also affected due to shortages of nursing staff in a context of increased workload regarding COVID-19 (Rodrigues *et al.*, 2020).

The communication process is a key element in nursing teams to keep patient's safety and care quality in a crisis context, where nursing care activities have to be rapidly restructured (Rodrigues *et al.*, 2020). The way that nurse managers approaches restructuration in crisis situations vary on setting (Lord *et al.*, 2021; Lyng *et al.*, 2021; Sugg *et al.*, 2022). In nursing homes the flow of information was kept using different channels, such e-mails and through software like Teams (Lyng *et al.*, 2021). While in British and Australian hospitals, team brief/huddle was a communication strategy frequently used among healthcare staff ; Lord *et al.*, 2021; Sugg *et al.*, 2022).

The results show that in hospital setting 44% of participants found that rules with regards to the information that had to be given to patients were not clear. An environmental scan of visitor restriction policies from 70 American medical centres shows that 23 (33%) centres provided information about how to communicate with inpatients and 5 (7%) centres described how healthcare teams would be communicating with patient's visitors/family (Harrison *et al.*, 2021). Furthermore, a study showed that communication was also a problem between nurses and managers, as 40% of ICU nurses felt they do not have sufficient information from managers about caring for a patient with COVID-19 (Lord *et al.*, 2021). Those nurses that received adequate and timely information (60%) had a higher willingness to provide nursing care to COVID-19 patients (Lord *et al.*, 2021).

The guarantee of good communication within teams and between services decreases uncertainty and encourages nurses to perform their duties, even in a context of a new viral

infection with unknown consequences (Lord *et al.*, 2021). In addition, it may increase the implementation of COVID-19 measures by healthcare staff.

The results show the lowest percentage value in nursing homes concerning information sharing. Actually, 32.9% of participants working in nursing homes found that rules with regards to the information that had to be given to patients were not clear. Interestingly, participants working in nursing homes implemented visitor restriction policies in a higher percentage than participants working in other settings. These findings indicate that the more clearly information is given to healthcare professionals; the more likely it is that visitor restriction policies are implemented. One factor that may explain the correlation between clarity of information sharing and the adherence to visitor restriction policies is the justification of visitor restriction policies. Actually, providing a justification to visitor restriction policies based on community protection and prioritizing the use of active voice (the subject of the sentence comes first and performs the action) rather than passive voice results in willingness to recommend the healthcare facility and may enhance the credibility of the sender's message (Hart *et al.*, 2021).

7.3 Responsible person for visitor restriction policies

The majority of participants that were responsible for implementing visitor restriction policies were registered nurses, regardless region and setting. In fact, nurses are often the first point of contact for patients' and residents' families and develop their duties at the bedside, which allows nurses to assess patients' family needs and preferences, emotional well-being, coping abilities and information needs (Moradian, 2018).

In addition, 21.6% of the questions regarding the responsible person for visitor restriction policies were not answered. The possibility of choosing more than one answer could be the reason, as more than one answer would have fit to participant's situation (e.g. a nurse manager could have chosen two different options, namely "me" and "nurse management").

The results show statistically significant differences between regions and the responsible person for visitor restriction policies, when this person was either a participant, a participant's workmate or when no one assumed the responsibility regarding visitor restriction policies. Noteworthy is the regional difference when no one was responsible for visitor restriction policies. While in Western Austria the occupancy of intensive care beds with COVID-19 cases was the highest in November 2020 (AGES, 2020b) and it registered

a high prevalence rate (BMBWF, 2020), it was also the region that registered the lowest percentage in this answer option. This may indicate that due to the bad epidemiological situation it was necessary to establish clear roles and responsibilities in Western Austria healthcare institutions.

There were also pronounced differences between settings and the responsible person for visitor restriction policies. Nurse managers assumed the responsibility for implementing visitor restriction policies in more percentage in nursing homes (93.4%) than in hospital (60.6%) and other healthcare facilities (77.7%). This result contrasts with the elevated percentage of participants working in nursing homes (26%) that considered that anyone assumed the responsibility concerning the implementation of organizational measures. These contradictory results may have arisen because participants could choose more than one answer to answer the question. Another reason could be the different staff structures among settings and the different length of stay of patients/residents across settings, which may have an impact on the communication flow within team and with patients.

7.4 Organizational measures concerning visitor restriction policies

The results show statistically significant differences between regions and organizational measures, specifically in two measures, which are the obligatory registration and the check of negative test results. Western Austria was the region that implemented fewer organizational measures regarding visitor restriction policies in percentage terms. This could be related with the high pressure that healthcare facilities in Western Austria underwent during the second COVID-19 wave, as the bed occupancy in ICUs was higher in percentage terms than in the other regions (AGES, 2020b; BMBWF, 2020).

In the different settings pronounced differences were also registered regarding organizational measures, mostly in obligatory registration, health checks for visitors and check of negative test results. In Austria, when exceptions to visitor restriction policies were made during the second COVID-19 wave, visitors had still to wear PPE, keep 2 meters of physical distance and regular hand hygiene (BMSGPK, 2020b). The use of PPE by visitors was also documented by other study as an organizational measure when visitors were permitted. Paediatric wards from USA and Canada required the use of surgical masks

for visitors (Kitano *et al.*, 2020). More than a half of participants working in hospitals conducted health checks for visitors prior to visit. Kitano et al, 2020 also documented screening activities that changed according to COVID-19 outbreaks and turned to be more active, asking typical COVID-19 symptoms such as cough to visitors and controlling their body temperature. Symptoms checks of visitors prior to entry were also conducted in inpatient healthcare facilities from USA (Hart *et al.*, 2021; Harrison *et al.*, 2021). Additionally to symptom checks Taiwanese wards asked about recent travels, cluster information as well as identification cards was required prior to entry (Hsu *et al.*, 2020). Actually, over two-thirds of the participants implemented obligatory registration to visitors.

The results show that in nursing homes more often organizational measures regarding visitor restriction policies were implemented than in other settings. This could be related to the clarity of information sharing regarding visitor restriction policies in nursing homes. The results show that visitor registration was the most implemented organizational measure in nursing homes (90.5%). During data collection visitor restriction policies fluctuated and were eased for short time periods. Nursing homes in Norway had to cope also with fluctuation in visitor restriction policies (Lyng *et al.*, 2021). As soon visitors were permitted in Norwegian nursing homes, the figure of a *visitor assistant* was created in order to enable visits and to comply with government regulations (Lyng *et al.*, 2021). The tasks of the *visitor assistant* were visitor's registry through a checklist and the explanation of nursing home's procedures to avoid the transmission of COVID-19 (Lyng *et al.*, 2021). Other organizational measures that were implemented in nursing homes in a higher percentage than in other settings were visitor's health checks and the control of the correct use of masks. Dutch nursing homes also conducted visitor's health checks to visitors, who also had to use masks (Dykgraaf *et al.*, 2021). In fact, no new infections were reported in this nursing home in the Netherlands (Dykgraaf *et al.*, 2021).

It is remarkable that checking negative COVID-19 test results was the measure that was performed in a lowest frequency in all regions and all settings. A reason might be that this task was not performed by nurses.

7.5 Strengths and Limitations

The strength of this study was the high number of participants, which far exceeded the previous power calculation. However; due to the exceptional circumstances of the pandemic, some limitations should be noted. First, the fluctuation in COVID-19 visitor restriction policies during data collection may have had an impact in participant's answers as their answers may correspond to time periods where visitor restriction policies were eased. Another limitation that has to be mentioned is that data was obtained via an online questionnaire and using a snowball technique. As a result, participants were irregularly distributed between region and settings. However, federal sates were grouped according to NUTS Systems, obtaining a similar sample in each of the three regional groups for analysis of regional differences. In the case of settings, there was still a big difference between settings despite of grouping them in three groups. These differences affected data analysis, getting in most of the comparisons statistically significant results. Therefore, most of the discussion focused on percentage difference that may have clinical implications.

7.6 Conclusion

COVID-19 pandemic has meant a big challenge to healthcare systems, where rapid and continuous adaptation of healthcare resources and regulations according to the epidemiological situation was the main strategy of the government of Austria (see Figure 1). This study provides comparisons between regions and nursing occupational groups concerning visitor restriction policies during the COVID-19 pandemic for the first time in Austria.

The findings showed differences between regions and visitor restriction policies. Western Austria was the region that was under the most pressure due to the epidemiological situation during the second COVID-19 wave and where, on average, more restriction policies in healthcare facilities were implemented. These differences between regions could pose a problem in neighbouring areas, as regulations would be different for population that may use the services from a different region where the live. Another example could be when patients are transferred to another hospital from a different region.

Other aspect of interest was the differences between settings. Nursing home was the setting where more visitor restriction policies as well as organizational measures were implemented. Furthermore, the information that should be given to visitors as well as the responsible person for visitor restriction policies was more clearly defined than in the other two settings. These results suggest that the strategies used in nursing homes to adapt to the new regulations of Austrian government were more effective than in other settings.

7.7 Recommendations

Recommendations for practice: There is unclear evidence that visitor restriction policies reduce the transmission of nosocomial infections (Moss *et al.*, 2021; IPFCC, 2021). Moreover, the negative impact of visitor restriction policies on patients, families and healthcare professional is an issue that has been researched in many countries (Hugelius, Harada and Marutani, 2021; Iness *et al.*, 2022; Moss *et al.*, 2021; Wendlandt, Kime and Carson, 2022; Zeh *et al.*, 2020). Therefore, the application of visitor restriction policies should not be considered in a context where there is not anymore scarcity of PPE and other measures to control spread out of SARS-CoV-2 are available (e.g. vaccination). A measure that helped in Norwegian nursing homes and could be considered in Austria regardless of the setting is the creation of a figure that is in charge of registering and explaining to

visitors healthcare facilities' procedures to avoid the transmission of nosocomial infections and allow visits.

Recommendations for research: Further studies could focus on the strategies and innovative solutions that were used during the second COVID-19 wave to cope with visitor restriction policies. Which communication channels/tools were used within team and with patients, how exceptions regarding restriction of visits were made and how the physical environment in different settings was managed in order to allow visitors should be further explored. In addition, further evaluation of patients' and families' satisfaction with visiting policies is important for ongoing pandemic planning and situations that may be associated with a strain on healthcare systems.

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Annex

PflegeriSChe SituatIon währENd der 2. COVID-19 WellE (SCIENCE)

1. Möchten Sie an dieser Onlinebefragung teilnehmen?
   - Ja
   - Nein
2. In welchem Bundesland arbeiten Sie?
   - Burgenland
   - Kärnten
   - Niederösterreich
   - Oberösterreich
   - Salzburg
   - Steiermark
   - Tirol
   - Vorarlberg
   - Wien
3. In welcher Art von Gesundheitseinrichtung sind Sie beschäftigt?
   - Krankenhaus
   - Langzeitpflegeeinrichtung (umfasst Pflegeheime, betreutes Wohnen, Pflegewohnhäuser etc.)
   - Rehabilitationseinrichtung
   - Einrichtung für Menschen mit Behinderungen
   - Hauskrankenpflege
   - Primärversorgung
   - Sonstiges
4. Zu welcher Berufsgruppe gehören Sie?
   - Diplomierte(r) Gesundheits- und Krankenpfleger*in
   - Diplomierte(r) Gesundheits- und Krankenpfleger*in mit akademischem Grad (Bachelor, Master, Doktorat)
   - Pflegeassistent*in
   - Pflegefachassistent*in
   - Fachsozialbetreuer*in
   - Schüler*in/Student*in
5. Wie lange sind Sie bereits in Ihrem Gesundheitsberufe bereits tätig?
   - < 5 Jahre
   - 5-10 Jahre
   - 11-20 Jahre
   - >20 Jahre

6. Wie viele Stunden pro Woche sind Sie in der pflegerischen Praxis beschäftigt?
    - <10 Stunden
    - 10-20 Stunden
    - 21-30 Stunden
    - 31-40 Stunden

7. Wie viele Stunden haben Sie in den vergangenen 2 Wochen durchschnittlich gearbeitet?
    - <10 Stunden
    - 10-20 Stunden
    - 21-30 Stunden
    - 31-40 Stunden
    - >40 Stunden

8. In welchem Jahr sind Sie geboren? JJJJ

9. Bitte geben Sie Ihr Geschlecht an:
    - Weiblich
    - Männlich

10. Gibt es zum derzeitigen Zeitpunkt der COVID-19 Pandemie folgende persönliche Schutzausrüstung (PSA):

	Ja, in ausreichender Menge	Ja, aber nicht in ausreichender Menge	Nein
Mund-Nasen-Schutz			
FFP1-Masken			
FFP2-Masken			
FFP3-Masken			
Schutzbrillen			
Gesichtsschutz/-visier			
Handschuhe			
Einmalschürzen			
Einmalkittel/Schutzmantel			
Ganzkörperanzüge			

11. Wie lange tragen Sie im Durchschnitt einen Mund-Nasen-Schutz, bevor Sie einen neuen aufsetzen?
    - Kürzer als 4 Stunden
    - 4-8 Stunden
    - Länger als 8 Stunden
    - Benutze ich nicht

12. Wie lange tragen Sie im Durchschnitt eine FFP-Maske, bevor Sie eine neue aufsetzen?
    - Kürzer als 4 Stunden
    - 4-8 Stunden
    - Länger als 8 Stunden
    - Benutze ich nicht

13. Fühlen Sie sich hinsichtlich verschiedener Aspekte der persönlichen Schutzausrüstung (PSA) ausreichend informiert?

	Ja	Nein
Art/Zweck der PSA		
Anziehen der PSA		
Ausziehen der PSA		
Entsorgen der PSA		

14. Haben Sie ausreichend Zeit, die PSA ordnungsgemäß an- und auszuziehen, bevor/nachdem Sie Kontakt mit COVID-19 Verdachtsfällen/Betroffenen hatten?
    - Ja
    - Nein
    - Nicht zutreffend

15. Haben Sie nach einem Kontakt mit COVID-19 Verdachtsfällen/Betroffenen ausreichend Zeit, die PSA ordnungsgemäß zu entsorgen?
    - Ja
    - Nein
    - Nicht zutreffend

16. Bitte vergleichen Sie die derzeitige Situation mit der Situation während der ersten Welle der COVID-19 Pandemie (Frühjahr 2020) hinsichtlich der unten genannten Begleitmaßnahmen.

	Besser als im Frühjahr	Gleich wie im Frühjahr	Schlechter als im Frühjahr	Nicht zutreffend
Transparenz über die Maßnahmen				
Zeitgerechte Informationsweitergabe seitens des Managements				
Kommunikation/Austausch im Team				
Einplanen von Pausen und Erholungsphasen				
Angebot an psychosozialer/mentaler Unterstützung (z.B. Supervision)				
Finanzielle Anreize (z.B.: Corona-Prämie)				
Sonderurlaub				
Sonstiges				

17. Welche Regelungen in Bezug auf COVID-19 gibt es in ihrer Einrichtung? *(Bitte kreuzen Sie alle durchgeführten Maßnahmen an)* □ Spezifische Hygienevorgaben
    - Regelungen zum Verhalten bei Auftreten einer SARS-CoV-2-Infektion
    - Regelungen bezüglich Verabreichung von Speisen und Getränken
    - Vorgaben zur Schulung des Personals bezüglich Hygienemaßnahmen
    - Vorgaben zur Schulung des Personals bezüglich beruflichem Risikoverhalten
    - Vorgaben zur Schulung des Personals bezüglich privatem Risikoverhalten
    - Verpflichtende Dokumentation der Schulung
    - Vorgaben für Betretungen durch externe Dienstleister*innen
    - Spezifische Regelungen für Patient*innen/Bewohner*innen, denen die Einhaltung der Vorgaben nicht zugemutet werden kann
    - Regelungen zur Steuerung der Besuche
    - Vorgaben zur maximalen Anzahl an Besucher*innen
    - Vorgaben zur Dauer der Besuche
    - Vorgaben zur Häufigkeit der Besuche
    - Vorgaben zu Besuchsorten
    - Regelungen zur verpflichtenden Voranmeldung von Besucher*innen
    - Regelungen zu Gesundheitschecks der Besucher*innen vor jedem Betreten der Einrichtung
    - Situationsangepasste Vorgaben für Personen, die regelmäßige Unterstützungs- und Betreuungsaufgaben leisten
    - Vorgaben zur Teilnahme an Screening-Programmen

18. Gibt es klare Vorgaben, welche Informationen an Besucher*innen/An-/Zugehörige weitergegeben werden dürfen?
    - Ja
    - Nein

19. Wer ist für die Regelungen/Maßnahmen bezüglich An-/Zugehörige zuständig?
    - Ich
    - Ein Kollege/ eine Kollegin
    - Eine Person aus dem Management (Stationsleitung, PDL, HL) Damit wurde eine eigene Person betraut.

WENN ICH, dann:

Welche organisatorischen Maßnahmen haben Sie in Bezug auf Besucher*innen durchgeführt? *(Bitte kreuzen Sie alle durchgeführten Maßnahmen an)*

- Information der Besucher*innen über verpflichtende Voranmeldungen
- Durchführung von Gesundheitskontrollen der Besucher*innen im Eingangsbereich
- Überprüfung der negativen Testergebnisse der Besucher*innen
- Überprüfung der Besucher*innen auf adäquate Atemschutzmasken
- Aushang eines Betretungsverbots für nicht medizinische Dienstleister*innen
- Ich habe keine der genannten Maßnahmen durchgeführt

20. Welche persönlichen Schutzmaßnahmen haben Sie im Rahmen Ihrer pflegerischen Tätigkeit in Bezug auf COVID-19 durchgeführt? *(Bitte kreuzen Sie alle durchgeführten Maßnahmen an)*
    - Wöchentliche Vorlage eines negativen PCR-Testergebnisses
    - Wöchentliche Vorlage eines negativen Antigen-Testergebnisses
    - Selbstbeobachtung auf Symptome (z.B. Fieber)
    - Abstandsregeln einhalten
    - Mund-Nasen-Schutz benutzen
    - FFP-Masken benutzen
    - Schutzbrille benutzen
    - Handschuhe benutzen
    - Einmalkittel/Schutzmantel benutzen
    - Sonstige
    - Ich habe keine der genannten Maßnahmen durchgeführt

21. Welche allgemeinen Schutzmaßnahmen haben Sie in Bezug auf COVID-19 durchgeführt? (Bitte kreuzen Sie alle durchgeführten Maßnahmen an)
    - Bei Patient*innen/Bewohner*innen auf Symptome achten (z.B. Husten oder Atemnot)
    - Bei Patient*innen/Bewohner*innen Zweimal täglich Fiebermessen
    - Patient*innen/Bewohner*innen regelmäßig über COVID-19 informieren
    - Patient*innen/Bewohner*innen bezüglich Schutzausrüstung informieren
    - Patient*innen/Bewohner*innen in der Handhabung des Mund-Nasen-Schutz anleiten
    - Die psychische und emotionale Verfassung der Patient*innen/Bewohner*innen beobachten
    - Mahlzeiten der Patient*innen/Bewohner*innen unter Einhaltung des Mindestabstands organisieren
    - Mindestens zweimal täglich Zimmer und Aufenthaltsräume durchlüften Verdachtsfälle an die Pflegedienstleitung und/oder Hausleitung melden
    - Patient*innen/Bewohner*innen mit Verdacht auf COVID-19 isolieren
    - Sonstige
    - Ich habe keine der genannten Maßnahmen durchgeführt
22. Hatten Sie jemals Symptome einer COVID-19 Erkrankung?
    - Ja
    - Nein
23. Sind Sie aktuell an der pflegerischen Versorgung eines COVID-19 Verdachtsfalls/Betroffenen beteiligt?
    - Ja
    - Nein
24. Waren Sie jemals an der pflegerischen Versorgung eines COVID-19 Verdachtsfalls/Betroffenen beteiligt?
    - Ja
    - Nein
25. Werden in Ihrer Einrichtung, unabhängig davon ob sie Kontakt mit COVID-19 Verdachtsfällen/Betroffenen hatten, alle Mitarbeiter*innen, regelmäßig getestet?
    - Ja, wöchentlich
    - Ja, monatlich
    - Ja, vierteljährlich
    - Ja, in anderen Abständen
    - Nein
26. Wie häufig wurden Sie aufgrund Ihrer pflegerischen Tätigkeit getestet? (*Hinweis: Diese Frage bezieht sich ausschließlich auf Ihre berufliche Tätigkeit in der pflegerischen Versorgung*.)
    - Nie
    - 1 Mal
    - 2 Mal
    - 3 Mal
    - 4 Mal
    - 5 Mal
    - Mehr als 5 Mal

Wenn 1 bis mehr als 5 Mal:

Wer hat die Testung für Sie veranlasst?

	Test 1	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Ich habe mich privat testen lassen.					
Die Einrichtung hat die Testung veranlasst.					
Die Testung war eine behördliche Testung der gesamten Einrichtung (z.B.: durch Gemeinde, Bezirkshauptmannschaft).					

Was war das Ergebnis Ihres Tests?

	Test 1	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Positives Testergebnis (COVID-19 infiziert)					
Negatives Testergebnis					

27. Wurden Sie behördlich abgesondert (= in Heimquarantäne geschickt)?
    - Ja
    - Nein

Wenn Ja:

Wie lange wurden Sie insgesamt bis zum heutigen Datum behördlich abgesondert (= in Heimquarantäne geschickt)?

- 1-7 Tage
- 8-10 Tage
- 11-14 Tage
- 15-21 Tage (3 Wochen)
- 22-28 Tage (4 Wochen)
- Mehr als 4 Wochen

28. Wie häufig wurden Sie getestet, da Sie privat Kontakt zu einem COVID-19 Verdachtsfall/Betroffenen hatten?
    - Nie
    - 1 Mal
    - 2 Mal
    - 3 Mal
    - 4 Mal
    - 5 Mal
    - Mehr als 5 Mal

Wenn 1 bis mehr als 5 Mal:

Wer hat die Testung für Sie veranlasst?

	Test 1	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Ich habe mich privat testen lassen					
Die Einrichtung hat die Testung veranlasst					
Die Testung war eine behördliche Testung (z.B.: Bezirksverwaltungsbehörde)					

Was war das Ergebnis Ihres Tests?

	Test 1	**Test 2**	**Test 3**	**Test 4**	**Test 5**
Positives Testergebnis (COVID-19 infiziert)					
Negatives Testergebnis					

29. Wurden Sie behördlich abgesondert (= in Heimquarantäne geschickt)?
    - Ja
    - Nein

Wenn Ja:

Wie lange wurden Sie insgesamt bis zum heutigen Datum behördlich abgesondert (= in Heimquarantäne geschickt)?

- 1-7 Tage
- 8-10 Tage
- 11-14 Tage
- 15-21 Tage (3 Wochen)
- 22-28 Tage (4 Wochen)
- Mehr als 4 Wochen

30. Die folgenden Fragen beschäftigen sich mit Ihren Gedanken und Gefühlen während der COVID19 Pandemie. Bitte geben Sie für jede Frage an, wie oft Sie in entsprechender Art und Weise gedacht oder gefühlt haben.

	=0 Ni	**=1 Fast nie**	**=2 manchmal**	**=3 Ziemlich oft**	**=4 sehr oft**
Wie oft waren Sie im letzten Monat aufgewühlt, weil etwas unerwartet passiert ist?					
Wie oft hatten Sie im letzten Monat das Gefühl, nicht in der Lage zu sein, die wichtigen Dinge in Ihrem Leben kontrollieren zu können?					
Wie oft haben Sie sich im letzten Monat nervös und gestresst gefühlt?					
Wie oft waren Sie im letzten Monat zuversichtlich, dass Sie fähig sind, Ihre persönlichen Probleme zu bewältigen?					
Wie oft hatten Sie im letzten Monat das Gefühl, dass sich die Dinge zu Ihren Gunsten entwickeln?					
Wie oft hatten Sie im letzten Monat den Eindruck, nicht all Ihren anstehenden Aufgaben gewachsen zu sein?					
Wie oft waren Sie im letzten Monat in der Lage, ärgerliche Situationen in Ihrem Leben zu beeinflussen?					
Wie oft hatten Sie im letzten Monat das Gefühl alles im Griff zu haben?					
Wie oft haben Sie sich im letzten Monat über Dinge geärgert, über die Sie keine Kontrolle hatten?					
Wie oft hatten Sie im letzten Monat das Gefühl, dass sich so viele Schwierigkeiten angehäuft haben, dass Sie diese nicht überwinden konnten?					

31. Open Answer Frage: Gibt es noch etwas, dass Sie uns mitteilen möchten? (*Hinweis: In diesem Zusammenhang möchten wir Sie nochmals darauf hinweisen, dass Ihre Teilnahme **anonym** ist. Niemand kann Ihre Antworten mit Ihnen in Zusammenhang bringen bzw. erfahren, dass Sie an der Studie teilgenommen haben.*)