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# Nation-wide survey (2018) on current practices of admission screening for carriage of multi-drug resistant-organisms in Swiss healthcare institutions

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14.04.2018

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## Abbreviation:

| | |
|---|---|
| ESBL | Extended-spectrum beta-lactamases |
| CPE | Carbapenem-Producing *Enterobacteriaceae* |
| ACIN | *Acinetobacter baumanii* |
| PSEUDO | *Pseudomonas aeruginosa* |
| VRE | Vancomycin-Resistant *Enterococcus* |
| MRSA | Methicillin-Resistant *Staphylococcus aureus* |
| MDRO | Multi-Drug Resistant Organism |

# Executive Summary

**Background:** In 2010, a survey conducted in Swiss ICUs revealed a lack of homogeneous MDRO screening practices. As more MDRO are emerging, an update was deemed necessary.

**Objective**: To evaluate current MDRO admission screening practices in Swiss hospitals and identify potential barriers against their implementation.

**Methods**: In early 2018, a nation-wide 34-item questionnaire was sent to every Swiss public and private healthcare institution providing inpatient care. Psychiatric institutions and nursing homes were excluded. Data were entered into a spreadsheet, checked for accuracy, and exported to STATA for descriptive analysis.

**Results:** 139 respondents answered for 180 institutions (response rate, 80%), with 57 % from public institutions and 61 % small-size (< 200 beds), 21 % medium-size, and 18 % large-size institutions (> 500 beds). Most non-responders were small-size institutions. The majority of hospitals (72 %) was located in the Swiss-German part. 83% of institutions had implemented some type of admission screening. Targeted screening included CPEs, ESBLs and MRSA at the institutional level for respectively 78 % (115), 81 % (118) and 98 % (145) of institutions. Respectively, 22 (28 %) and 9 (9 %) of private and public institutions did not perform any MDRO admission screening. Among hospitals with on-admission screening, VRE (44 % of institutions), multi-resistant *Acinetobacter baumanii* (41 %) *and Pseudomonas aeruginosa* (37 %) were systematically searched only by a minority of institutions, without differences between small and large institutions. A large diversity of risk factors for targeted screening and some heterogeneity in body sites screened were also revealed by this survey. Admission-screening practices were mostly impeded by a difficulty to identify high-risk patients (44 %) and non-compliance of healthcare workers (35 %). Reimbursement issues were less commonly cited as obstacle (15 %).

**Conclusions:** The survey revealed good compliance with on-admission MDROs screening practices in larger acute care hospitals, but also important gaps in small and private institutions. A mismatch between the current epidemiologic MDRO situation and screening practices was noticed with a disproportionate focus on MRSA and a possible lack of awareness for possible spread of VRE, *Acinetobacter* and *Pseudomonas* by unknown carriers, including patients transferred within Switzerland. These results highlight the need for uniform national MDRO screening standards.

## Objectives

- To better understand current MDRO screening practices at admission to Swiss hospitals.
- To identify barriers impeding the implementation of best practices.
- To discuss possible solutions towards harmonization of current screening practices in Switzerland.

## Population

This survey included 271 public and private institutions providing inpatient care in Switzerland. We excluded stand-alone psychiatric institutions, palliative care, nursing homes, and pain therapy centers. Thus, this survey finally addressed 228 institutions.

From January to March 2018, each institution received an initial email, followed by 3 written reminders as well as a phone call before the last reminder, in case of non-response. Each mail was sent individually and included an official invitation letter in the respondent language (German, French or Italian). Finally, 193 institutions answered, achieving an 85% response rate. After the exclusion of 2 double entries, 6 psychiatric institutions and 5 non-relevant institutions (Pain therapy centers, drug addiction, palliative center, nursing homes and an ambulatory care center), 180 institutions were included in the final analysis. Importantly, 139 respondents provided answers for those 180 institutions.

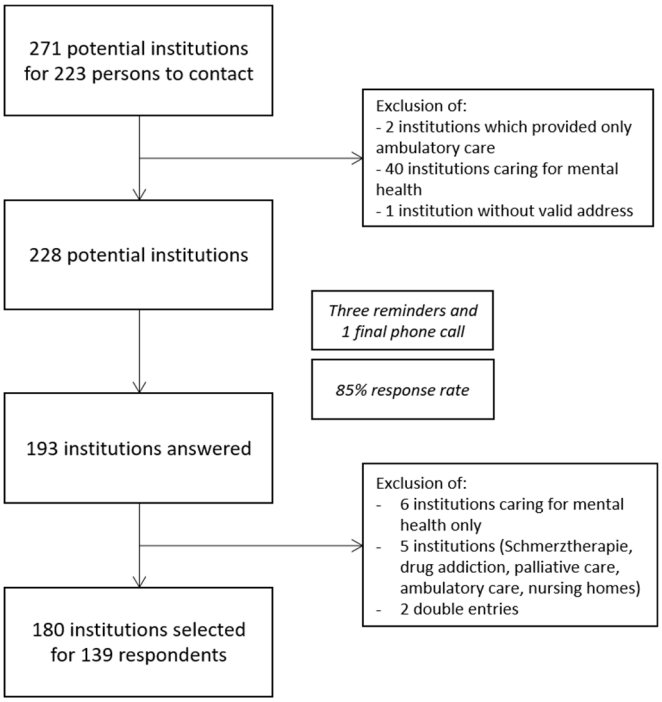



**Figure 1. Survey respondents and institutions**

## Survey creation, validation and pilot testing

This survey was created, translated in the three official languages, tested locally and sent to the different institutions through the online platform SurveyMonkey®. We collected demographic information, current practices concerning universal and targeted screening at admission, risk factors considered for targeted screening, sample body sites for swabs and cultures, repeat screening as well as preemptive contact precautions and isolation measures for high risk patients, the presence of local guidelines and problems faced to implement on-admission screening. Each question was mandatory to complete the survey.

## Data analysis

All analyses are institution-based (n=180) and not respondent-based (n=139). Therefore, we assume that data provided by respondents caring for multiple institutions are similar. Rare analyses based on the number of respondent are always indicated in the legend. Data were extracted from the online platform to an Excel® spreadsheet, checked for accuracy and exported for descriptive analysis with the software STATA/IC v.15.0® (StataCorp. 2017. Stata Statistical Software: Release 15. College Station, TX: StataCorp LLC.).

## Results

### 1. Epidemiological data

**Table 1. Characteristic of non-respondents**

| Variables | Respondents (n=180) | Non-respondents (n=35)* |
|---|---|---|
| Institutional size | (missing values =0)* | (missing values =15)* |
| <200 beds (%) | 109 (61) | 20 (100) |
| 200-500 beds (%) | 38 (21) | 0 |
| >500 beds (%) | 33 (18) | 0 |
| Linguistic region | (missing values =0)* | (missing values =0)* |
| Swiss-German (%) | 129 (72) | 30 (86) |
| French (%) | 42 (23) | 3 (8) |
| Italian (%) | 9 (5) | 2 (6) |

** Characteristics for non-respondents are manually searched post-hoc on internet*
** From 228 institutions, 13 institutions were excluded from the survey (cf. flowchart).*

In this survey, public institutions and small hospitals are best represented (respectively 57% and 61%), mainly in the Swiss-German part (cf: Appendix figure 1, 2 and 4). Institutions often offered acute care, rehabilitation and chronical care. Only a few offered pediatrics and psychiatry (Appendix figure 3.) This survey was completed by diverse types of healthcare workers (as shown below). Other respondents' functions can be found on the appendix table 1.

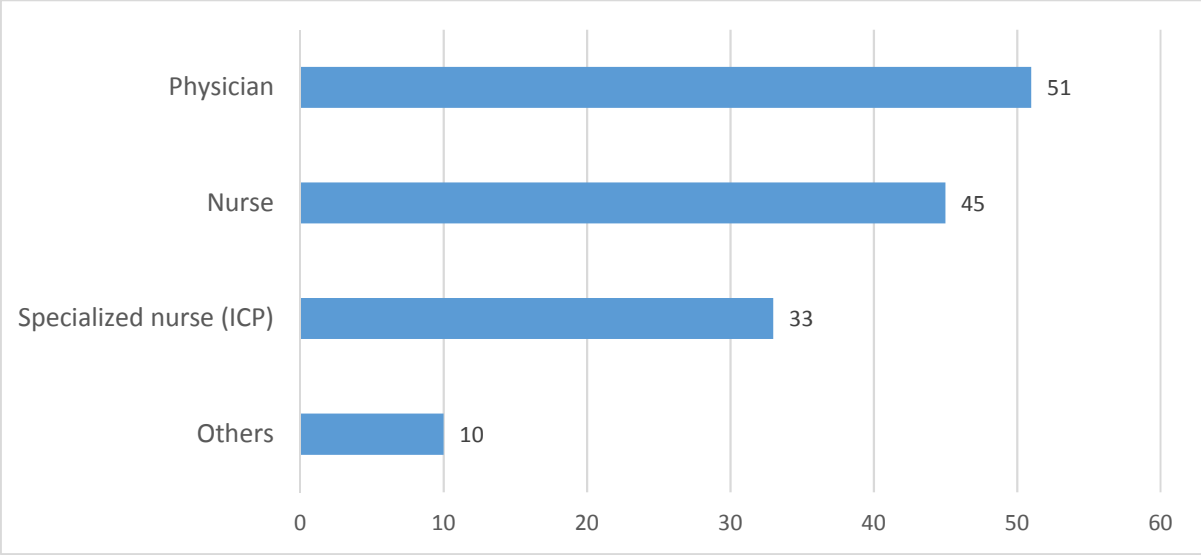



**Figure 2. Respondent function (n)**
** N= 139 respondents*

2) Admission screening

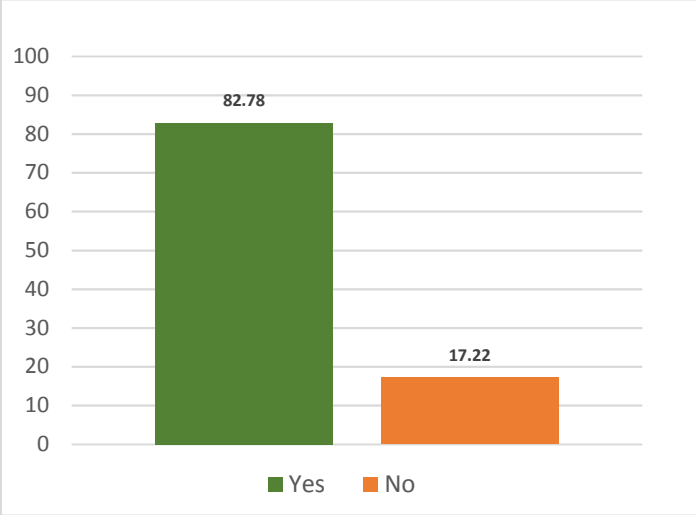



**Figure 3. Admission screening (%)**
** N= 180*

Eighty-three percent of institutions had implemented some type of on-admission screening, mainly in acute care and rehabilitation and chronic care (Appendix figure 5). This principle of MDRO screening upon admission to large acute-care hospitals is broadly accepted, despite few disparities in the private sector (28% of respondents practice neither universal nor targeted admission screening, figure 4). These disparities are also noticeable in small hospitals (figure 5). Adherence to admission screening is well balanced between French and Italian speaking regions (82%) and Swiss-German speaking regions (83%) (Appendix figure 6).

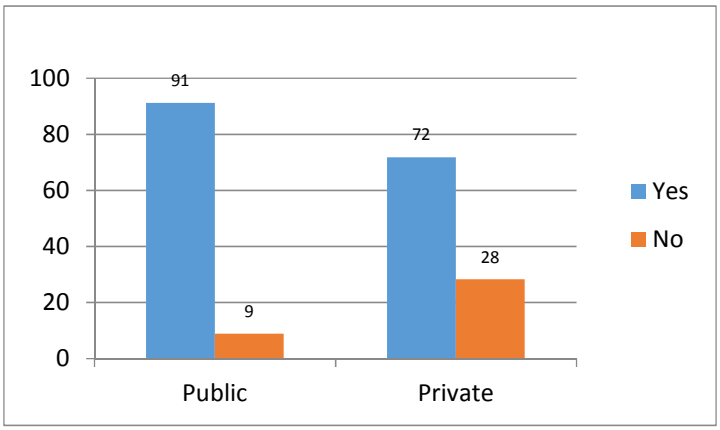



**Figure 4. Admission screening according to the institutional category (%)**
** N= 180*

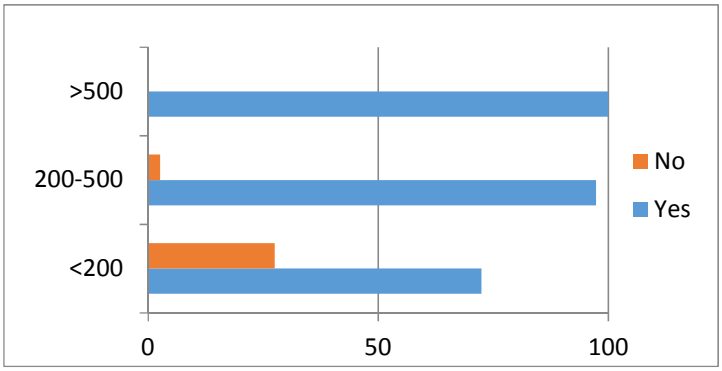



**Figure 5. Admission screening stratified by institutional size (%)**
** N= 180*
** Y-axis= number of beds*

## 2. Universal screening at admission

Among the few institutions and units implementing universal screening at admission in ICUs (Appendix figure 7), screening focused on ESBL, CPE and MRSA. MDRO screening for *Acinetobacter baumanii*, *Pseudomonas aeruginosa* and VRE was not routinely performed (only 50%).

**Table 2. MDROs concerned by the universal screening in ICUs, n (%)**

| | |
|---|---|
| ESBL | 6 (100) |
| CPE ** | 3 (100) |
| *Acinetobacter baumanii* | 3 (50) |
| *Pseudomonas aeruginosa* | 3 (50) |
| VRE | 3 (50) |
| MRSA | 6 (100) |

** N= 180*

Universal screening was only implemented in specific units for 14 institutions (10%, appendix figure 8), never at the entire institutional level, focusing on ESBL, CPE and MRSA, without screening for *Acinetobacter baumanii*, *Pseudomonas aeruginosa* or VRE (only 36%, 50% and 43% of units, respectively; Appendix table 2). Units concerned by universal MDRO screening are represented in the following table.

**Table 3. Units concerned by the universal MDRO screening (n)**

| | |
|---|---|
| Units specialized for international patients | 1 |
| All rehabilitation units | 1 |
| Surgery, Medicine and G&O | 1 |
| All units after an admission via emergency services | 1 |
| Dialysis unit | 1 |
| Leukemia ward | 1 |
| Septic orthopedic unit | 1 |
| Transplantation unit | 1 |

** Data were manually synthetized based on respondents comments*
** based on the respondent number and not the institutional number (n=139)*

## 3. Targeted screening at admission

Similarly to universal admission screening, there is a lack of awareness concerning the risk of importation of MDROs such as *Acinetobacter baumanii*, *Pseudomonas aeruginosa* and VRE (less than 50% of institutions included targeted admission screening for those MDROs). For other MDROs, surveillance is well implemented at the institutional level (for 78-98% of institutions). Additional efforts might be necessary for ESBLs and CPEs to reach the same level of surveillance as for MRSA.

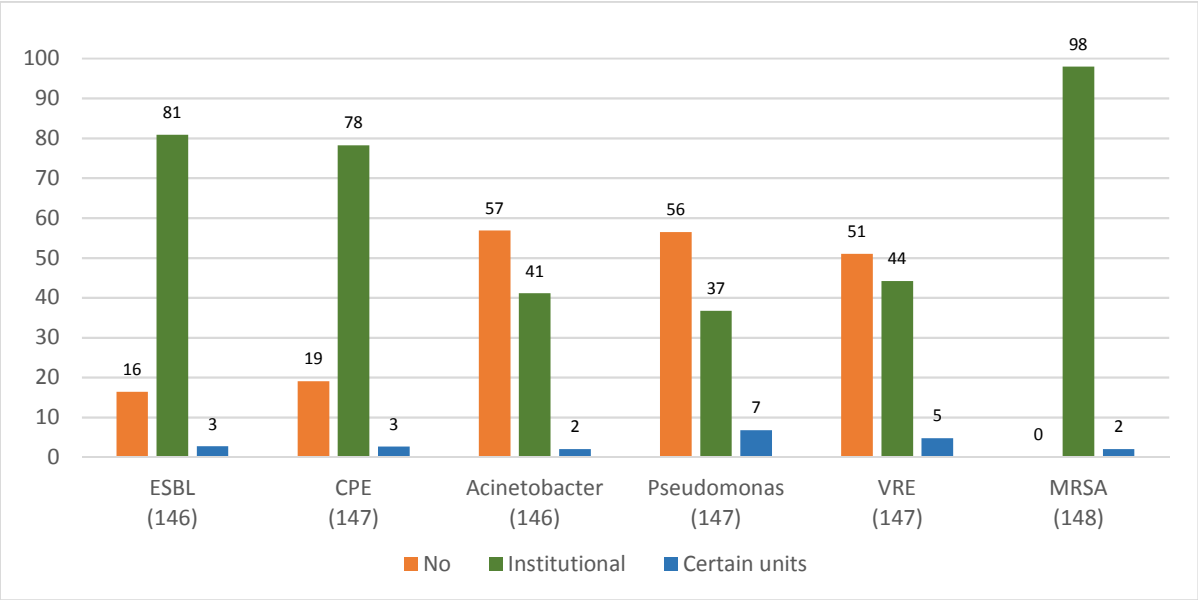



**Figure 6. Targeted admission screening for each pathogen (%)**

** N: number of answers for each pathogen*

** Missing values: ESBL= 34, CPE=33, Acinetobacter baumanii = 34, Pseudomonas aeruginosa = 33, VRE= 33 and MRSA= 32*

It is interesting to note the absence of an institutional targeted screening policy for *Acinetobacter baumanii*, *Pseudomonas aeruginosa* and VRE both in small and large hospitals, respectively in 37 vs 30%, 36 vs 27%, and 56 vs 30% (appendix figure 9 and 10). This lack of screening for these MDROs in large hospitals is worrisome. The units specifically implementing a targeted admission screening are specified in the appendix table 3.

Well-recognized risk factors to screen high-risk patients are "known carriers", "hospitalisation abroad" and a "direct transfer from abroad". Other risk factors are still heterogeneously recognized among institutions.

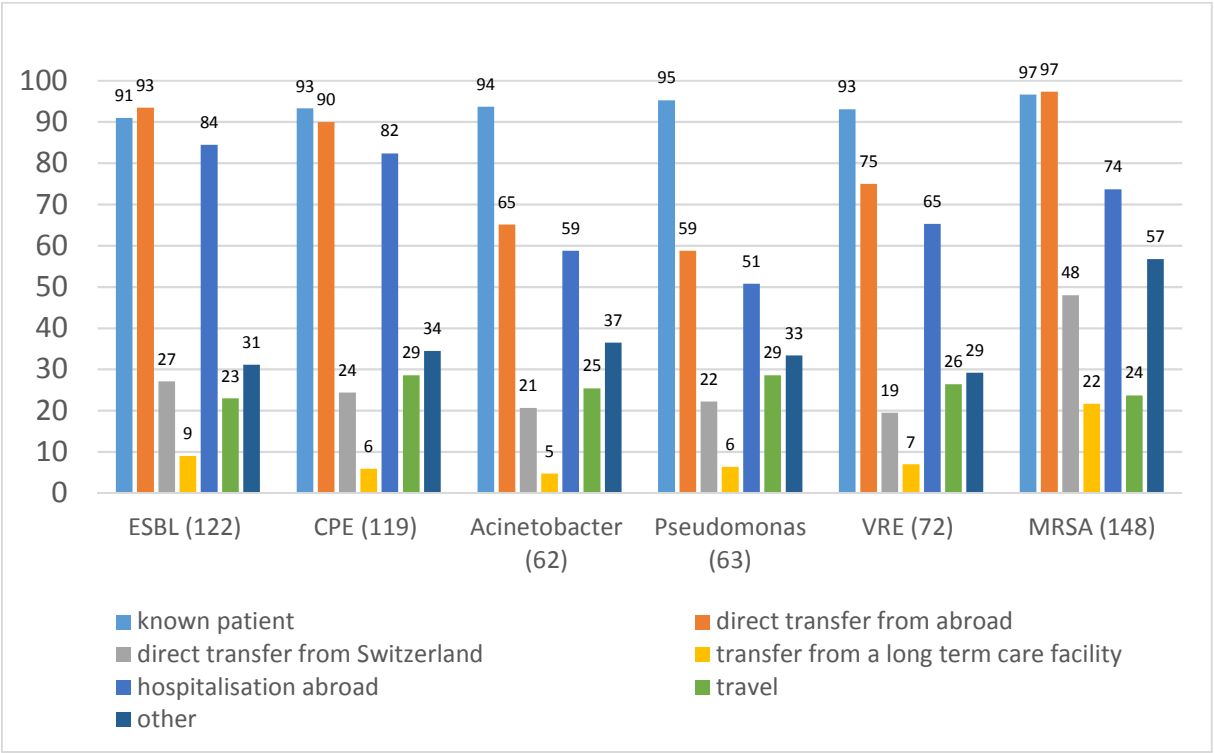



**Figure 7. Risk factors used for targeted admission screening, for each pathogen concerned by targeted screening (%)**

** N: Answers for each pathogen if they are specifically screened*

** Number of missing values: ESBL= 58, CPE= 61, Acinetobacter baumanii = 118, Pseudomonas aeruginosa = 117, VRE= 108 and MRSA= 32.*

The respondents that had replied that their institution performed targeted screening of patients hospitalied abroad were also asked to report the timeframe considered for this risk factor. Mostly, institutions were concerned about a hospitalization abroad in the last 12 months.

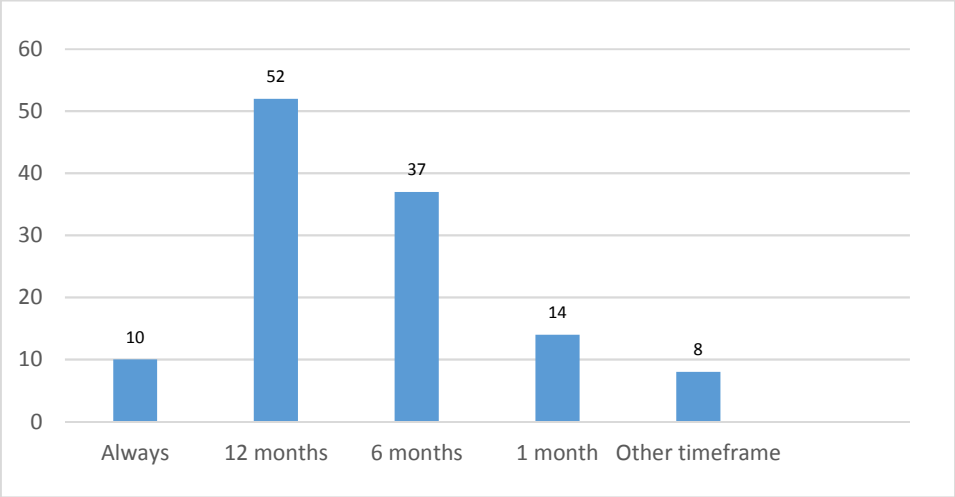



**Figure 8. Timeframe considered for targeted screening of a patient hospitalized abroad (n)**
** n= 180*
** Missing values= 59*

**Table 4. Other timeframes considered (n)**

| | |
|---|---|
| 14 days | 2 |
| 2 months | 2 |
| 3 months | 2 |
| 1-2 years | 1 |
| 2 years | 1 |

** Data were manually synthetized based on respondents comments*
** n= 8*

If reporting targeted screening of a transfer from another Swiss hospital, respondents were also asked if they targeted a specific region. As a result, we observe that much attention is focused on the Tessin and Western Switzerland (figure 9). In the Western part (n=146), cantons of Geneva and Vaud are especially targeted; as well as the Tessin in the Eastern part. More detailed regions are displayed on the appendix figures 11 and 12.

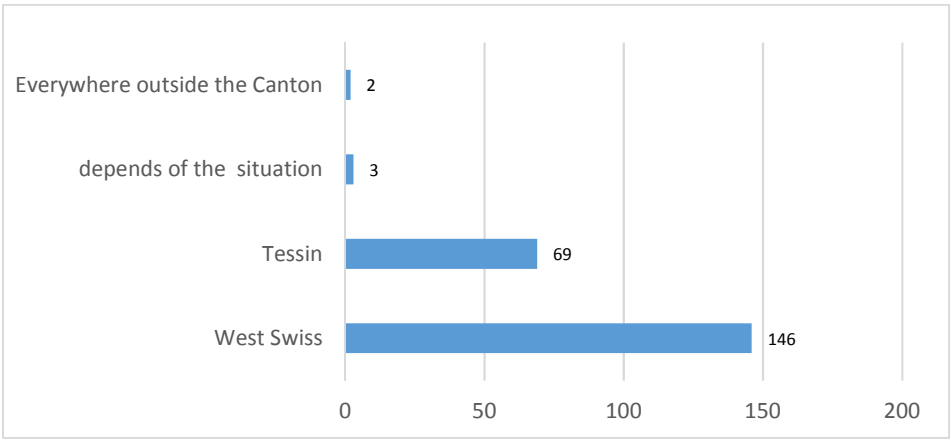



**Figure 9. Regions concerned by screening direct transfers from another Swiss hospital (n)**
** Data were manually synthetized based on respondents comments*

Other risk factors were extracted from the respondents' comments; they are represented on the appendix figures 13 and 14. Risk factors that were overlapping the previous choices are not displayed on this figure (specific region for a direct transfer…).

## 4. Body sites for sampling

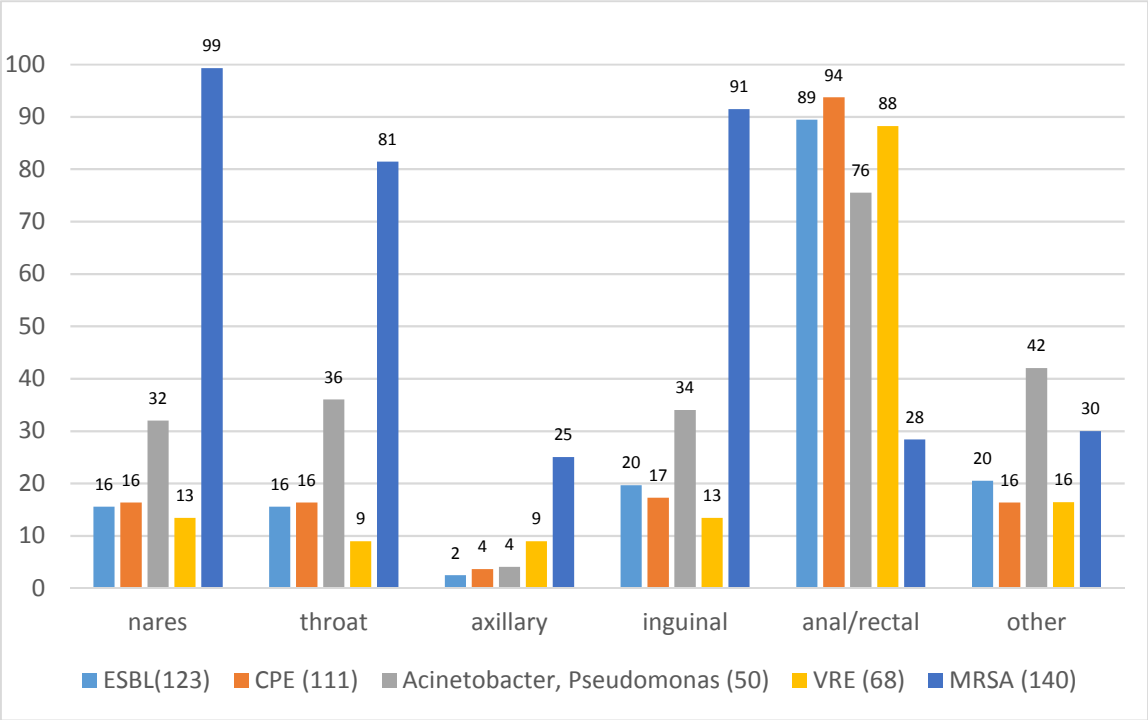



**Figure 10. Body sites for swab collection and sampling (%)**
*(n) Number of answer for each pathogen targeted with a screening swab*
*Missing values: ESBL= 57, CPE= 69, Acinetobacter baumanii /Pseudomonas aeruginosa = 130, VRE= 112, MRSA= 40.*

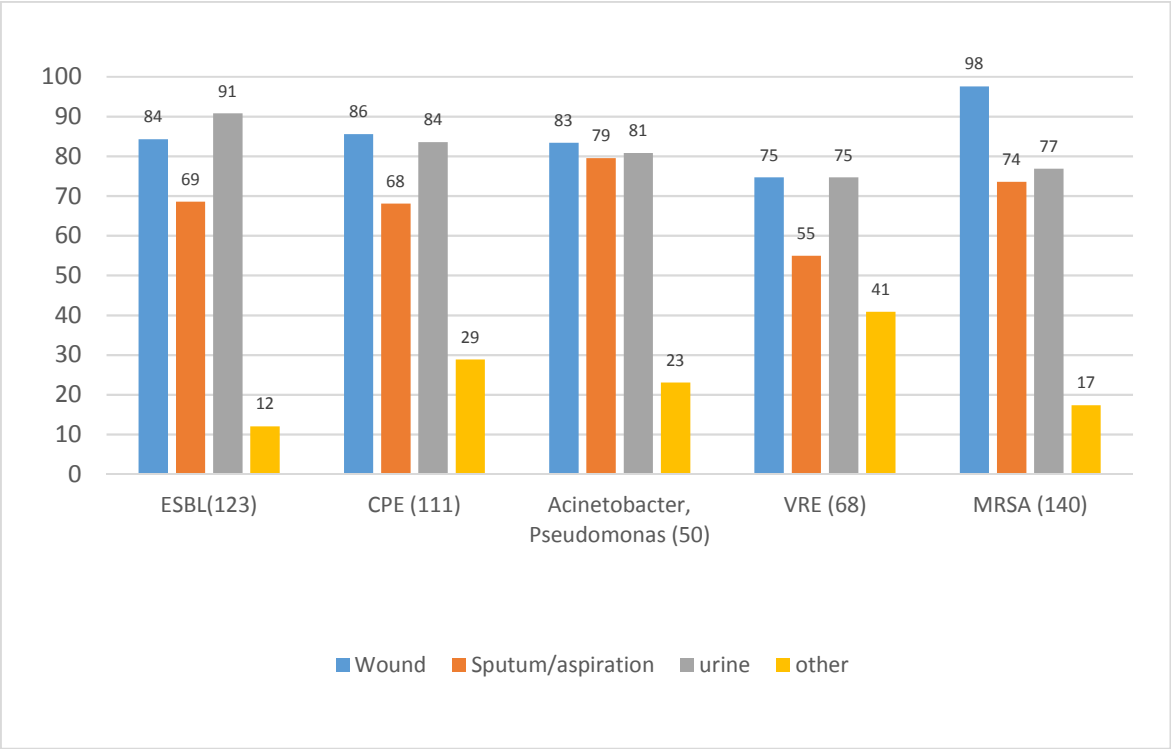



**Figure 11. Clinical cultures for each pathogen in case of specific symptoms (%)**
*(n) Number of answer for each pathogen targeted with a culture*
*Missing values: ESBL= 57, CPE= 69, Acinetobacter baumanii /Pseudomonas aeruginosa = 130, VRE= 112, MRSA= 40.*

## 5. Implementation

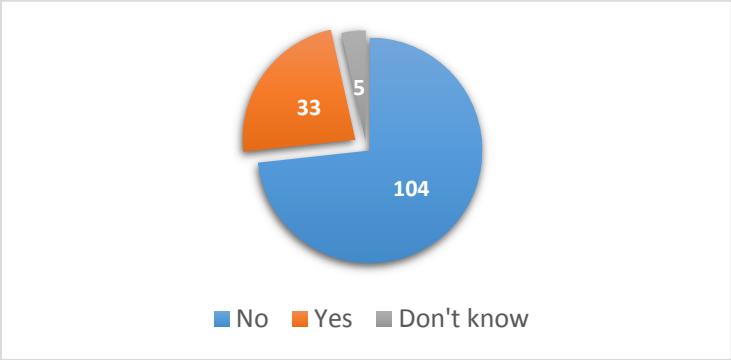



**Figure 12. Routine iterative screening for high risk patients (n)**
*N= 180 institutions*
*Missing values: 38*

Only a minority of institutions perform repeat (at least 2) swabs for patients at highest risk of MDRO carriage. The lack of routine iterative screening for very high risk patients might demonstrate a lack of awareness on the limitations of screening test performances. This lack of routine iterative screening might be an important issue especially for CPE.

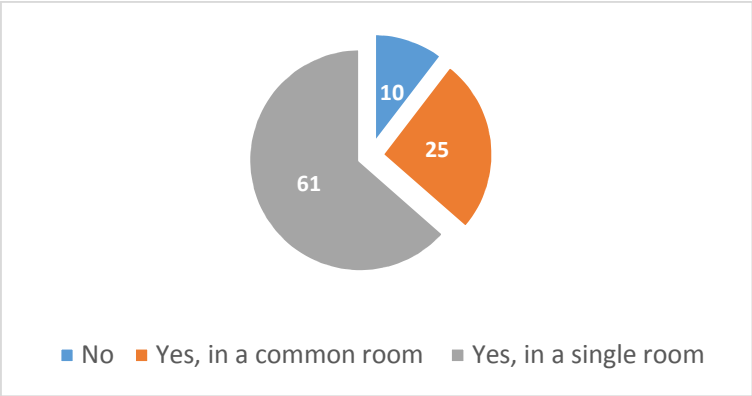



**Figure 13. Pre-emptive isolation measures implemented in ICUs (n)**
*N= 180 institutions*
*Missing values: 84 (non-applicable, don't know)*

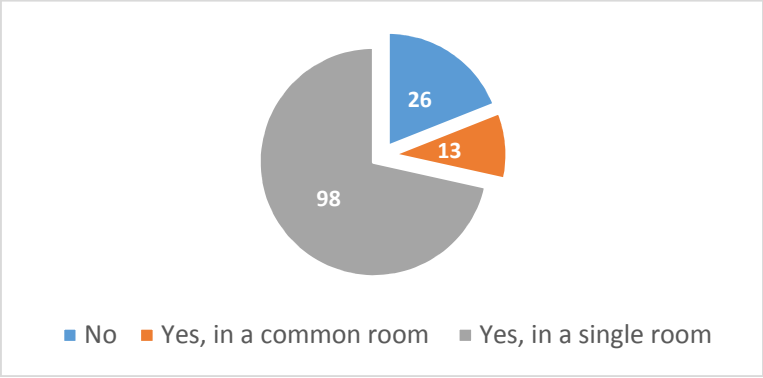



**Figure 14. Pre-emptive isolation measures implemented in other units (n)**
*N= 180 institutions*
*Missing values: 43 (non-applicable, don't know)*

Of note, many institutions have preemptive isolation practices in place for high-risk patients, mostly in single rooms whenever available.

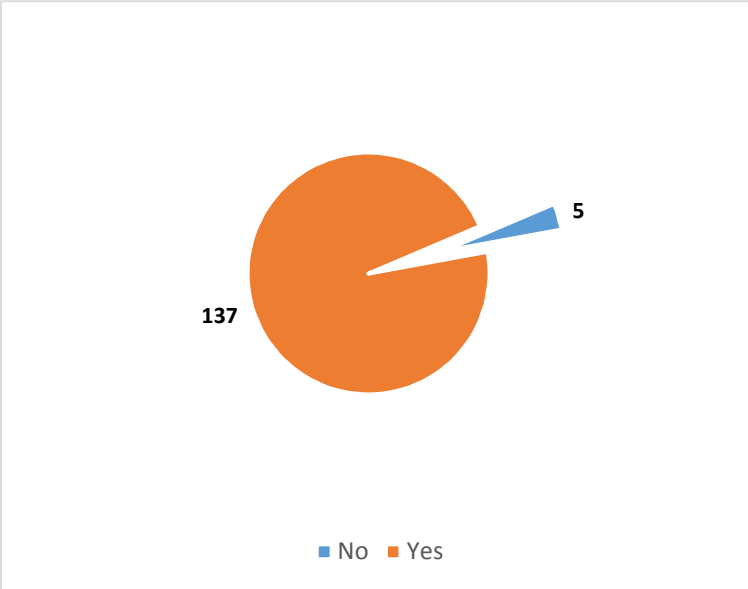



**Figure 15. Presence of local recommendations for admission screening (n)**
*N tot= 180 institutions*
*Missing values: 38 (don't know)*

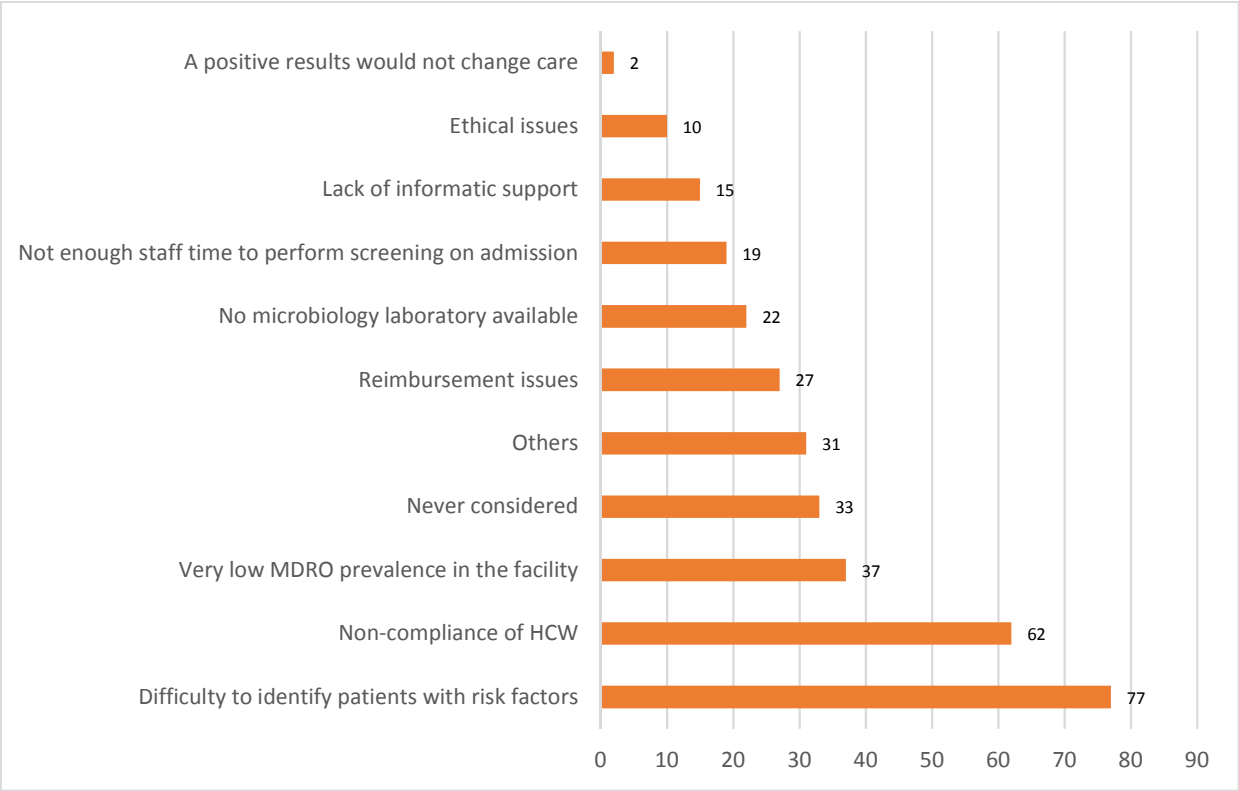



**Figure 16. Problems faced to implement MDRO screening at admission (n)**
*N tot= 180 institutions*
*Missing values = 4*

Other problems reported to impede the implementation of an admission screening were reported and synthetized in the Appendix (figure 15 and 16). Respondents could provide more than one answer.

**Table 5. Main suggestions expressed by respondents to homogenize MDRO admission screening practices (n)**

| | |
|---|---|
| other | 12/48 |
| working group/expert comittee | 4/48 |
| guidelines | 4/48 |
| political support | 27/48 |
| simplification | 4/48 |
| financial support | 5/48 |
| microbological support | 3/48 |
| informatic support | 1/48 |
| Communication btw healthcare institutions | 1/48 |
| hospital autonomy | 2/48 |
| Against recommendations | 2/48 |

** n= 180*
** Data were manually synthetized based on respondents comments*
** The exhaustive list of suggestions can be found in the appendix.*

## Conclusions

The nation-wide survey to examine current practices of MDRO admission screening was answered by 180 institutions, representing an excellent response rate and the diversity of healthcare institutions in Switzerland, among public, private, different sectors and different sizes. Psychiatric institutions, nursing homes, and other institutions offering palliative care and alternative medicine were not included.

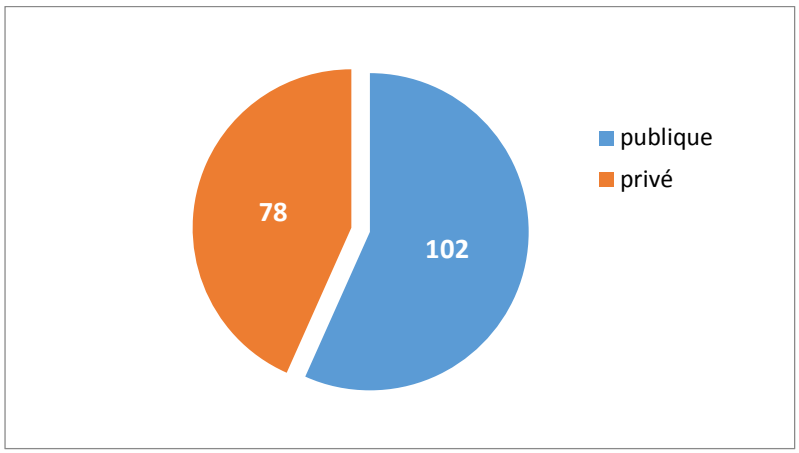
This survey observed overall a good compliance with on-admission screening practices in larger acute-care hospitals, but also gaps in small and private institutions. A mismatch between current epidemiologic situation and screening practices was noticed with a disproportionate focus on MRSA and a possible lack of awareness for possible spread of *Acinetobacter baumanii, Pseudomonas aeruginosa* and VRE by unknown carriers, including patients transferred within Switzerland. VRE might also be responsible for multiple nosocomial outbreaks within Switzerland, as recently shown in Vaud. Therefore, this survey helps to highlight the lack of awareness about important MDROs and existing confusion about risk factors that might be addressed through uniform national standards. We also observed the need for such standards in comments addressed by respondents.

This survey suffers from several limitations. First, some respondents answered for multiple institutions, introducing potential bias. Second, we were unable to perform external validation, consistency check and evaluation of interrater variability. However, due to the respondents' number and the results observed, these results highlight the need for uniform national MDRO screening standards. Implications from this survey would be the promotion of the importance of MDRO screening among smaller and private healthcare institutions and of a change in practices concerning targeted MDRO screening to focus on ESBLs and CPEs. Harmonized, clear and accessible guidelines would support standardization of risk factors used for targeted admission screening and of sample sites for admission screening.

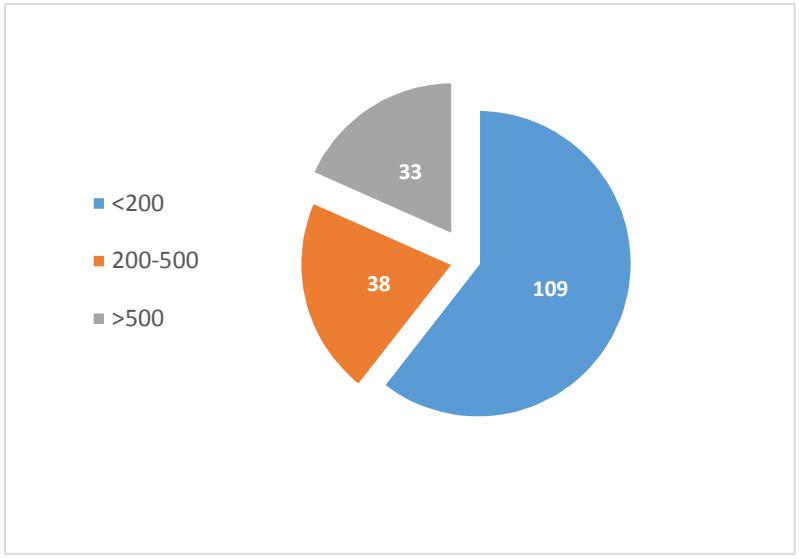
## Acknowledgments

We would like to thank our partners for their precious help concerning the creation and the sending of this survey: Corinne Corradi (BAG), Isabelle Zenklusen (BAG), Dr Niccolo Buetti, Dr Carlo Balmelli, Laetitia Qalla-Widmer (SIPI), H+, FIBS, SSHH, Alexandra Peters, HUG SPCI nurses. The survey was carried out on behalf of Swissnoso and the Swiss Federal Office of Public Health

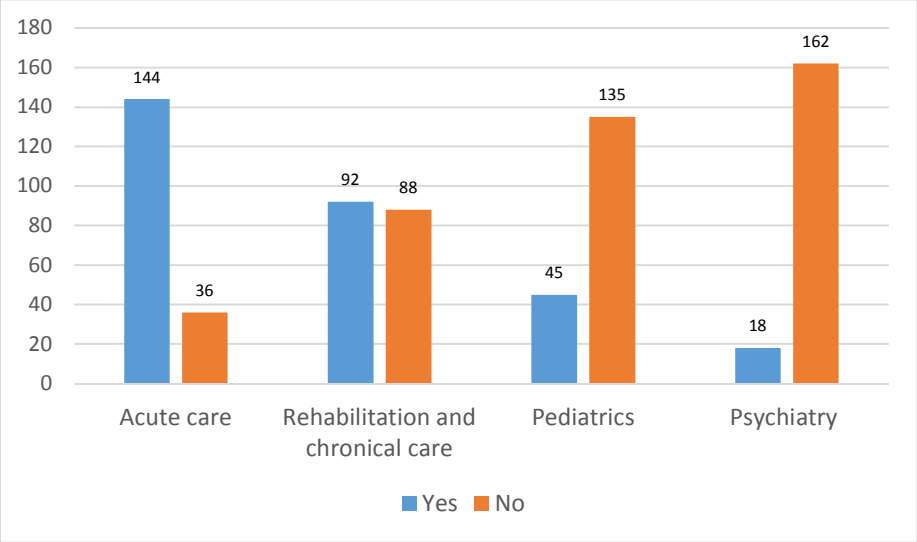
# Appendix (figures)



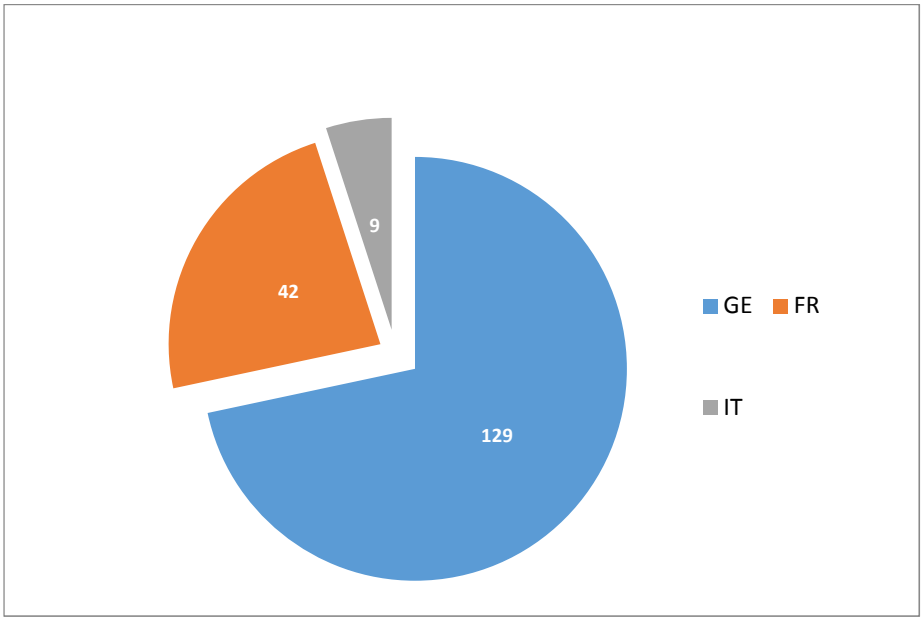

*Appendix Figure 1: Institution category among respondents (n)*
** n= 180*



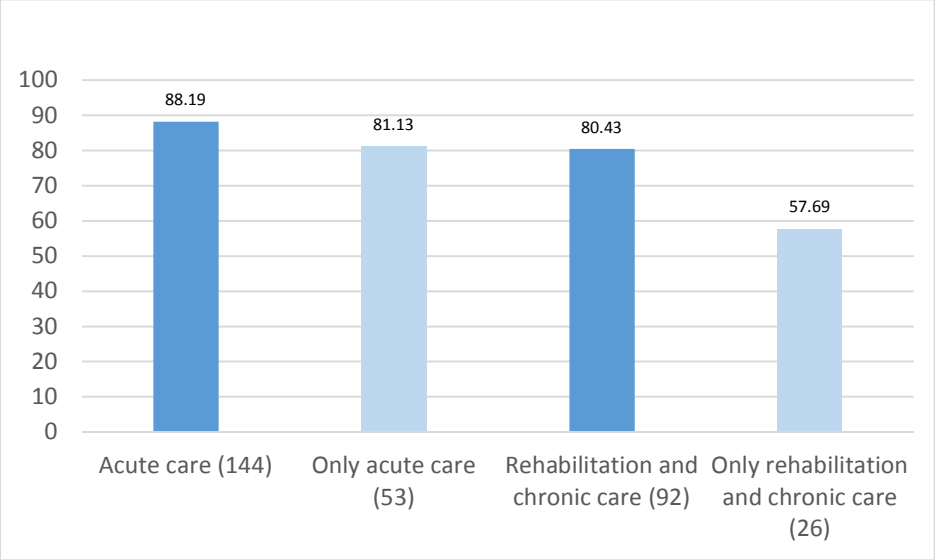

*Appendix Figure 2: Institutional size among respondents (n)*
** n= 180*



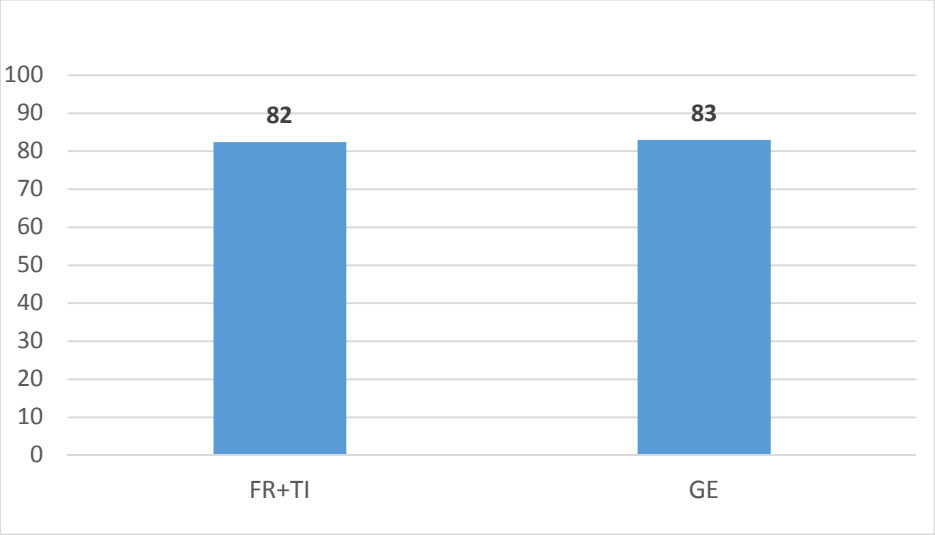

*Appendix Figure 3. Sectors of care provided by the institutions (n)*
** n= 180 (often cumulated by the respondents)*



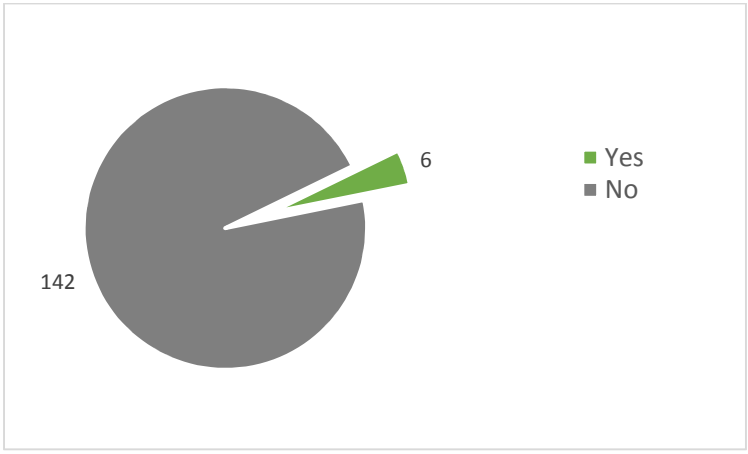

*Appendix Figure 4: Linguistic regions among respondents (n)*
** n tot= 180*



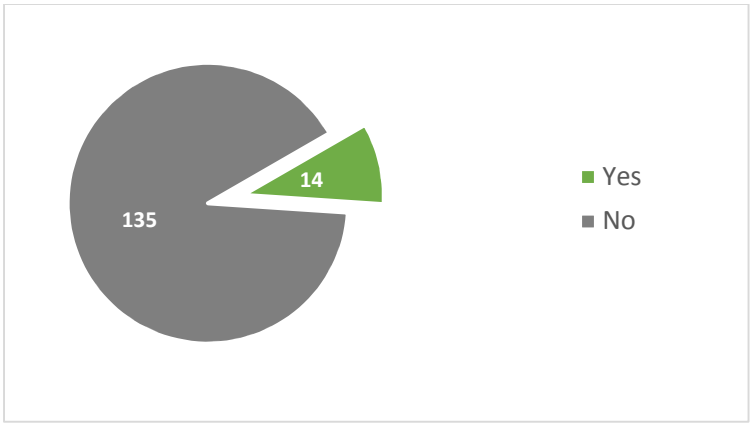

*Appendix Figure 5: Admission screening rate per sector (%)*
** N= 180*



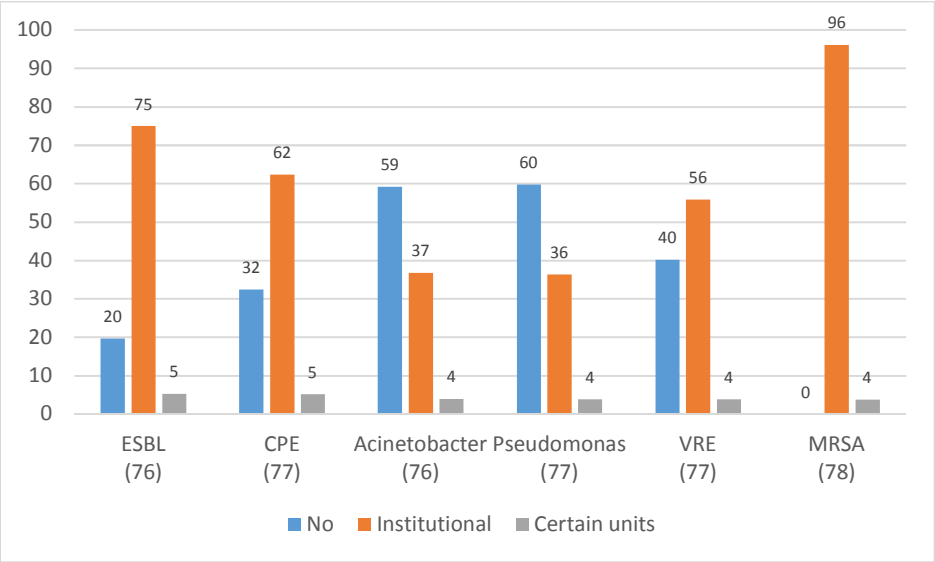

*Appendix Figure 6: Admission screening rate per linguistic region (%)*
** n= 180*



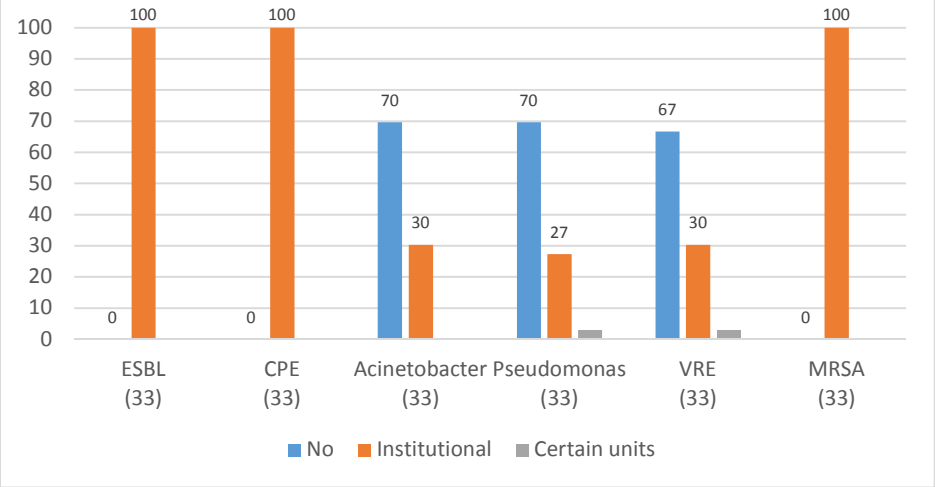

*Appendix Figure 7: Universal screening in ICUs (n)*
** n= 180*
**Missing values= 32 (31 no screening practices in the previous question; 1 "don't know")*



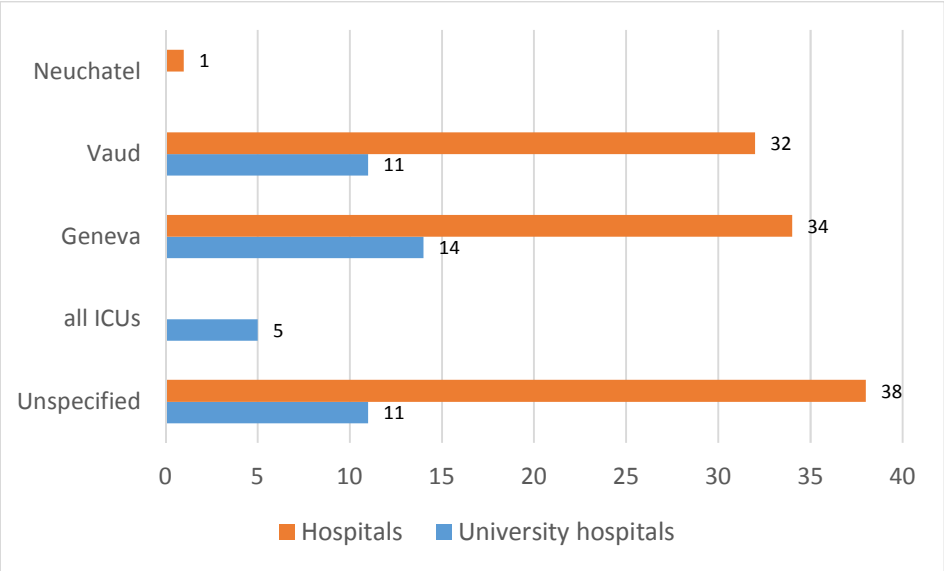

*Appendix Figure 8: Universal screening in some units (n)*
** n= 180*
**Missing values= 31 (no screening practices in the previous question)*



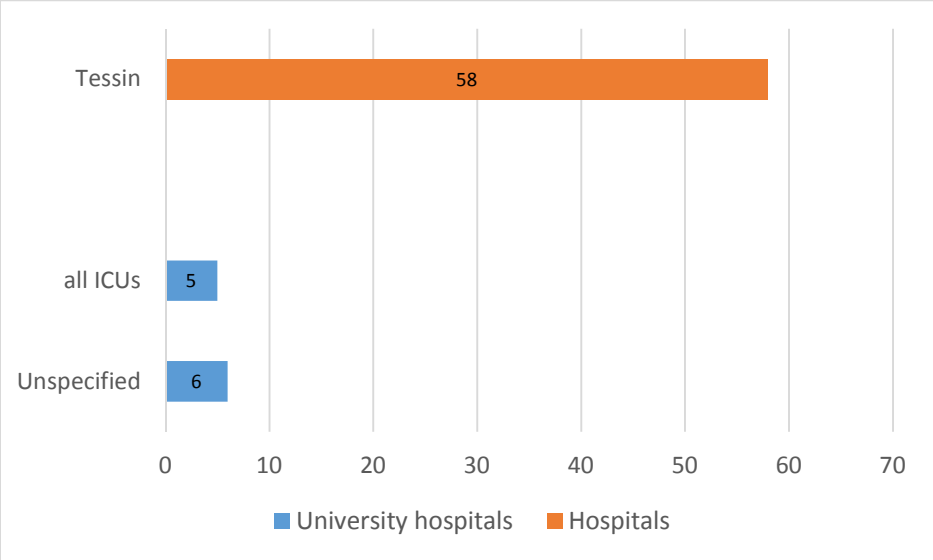

*Appendix figure 9: Targeted screening among small hospitals (<200 beds) (%)*
** N: number of answers for each pathogen*
** Missing values: ESBL= 104, CPE=147, Acinetobacter= 146, Pseudomonas= 33, VRE= 147 and MRSA= 148*



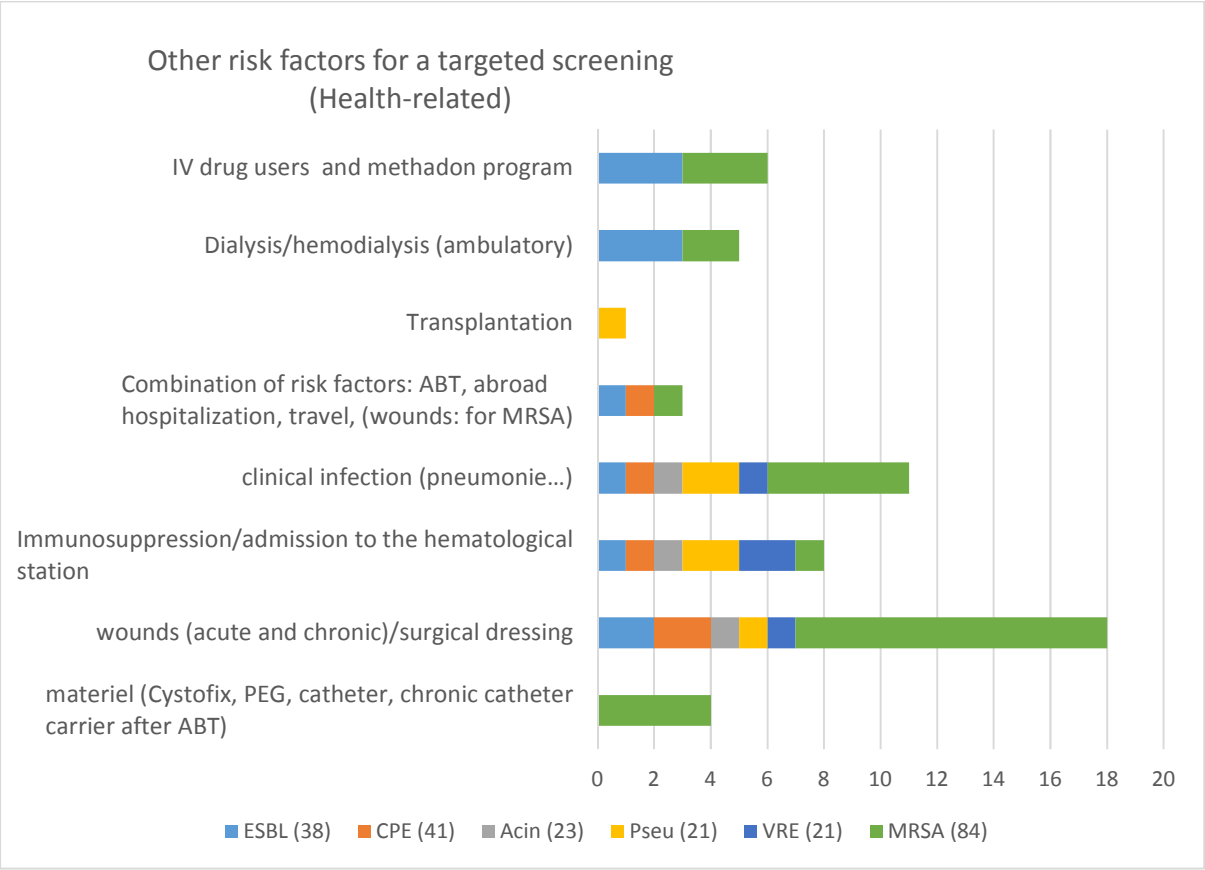

*Appendix figure 10: Targeted screening among large hospitals (>500 beds) (%)*
** N: number of answers for each pathogen*
** Missing values: ESBL= 147, CPE=147, Acinetobacter= 147, Pseudomonas= 147, VRE= 147 and MRSA= 147*




*Appendix figure 11. Western regions concerned by the direct transfer from a Swiss Hospital (n)*
** Data were manually synthetized based on respondents comments*




*Appendix figure 12. Eastern regions concerned by the direct transfer from a Swiss Hospital (n)*
** Data were manually synthetized based on respondents comments*

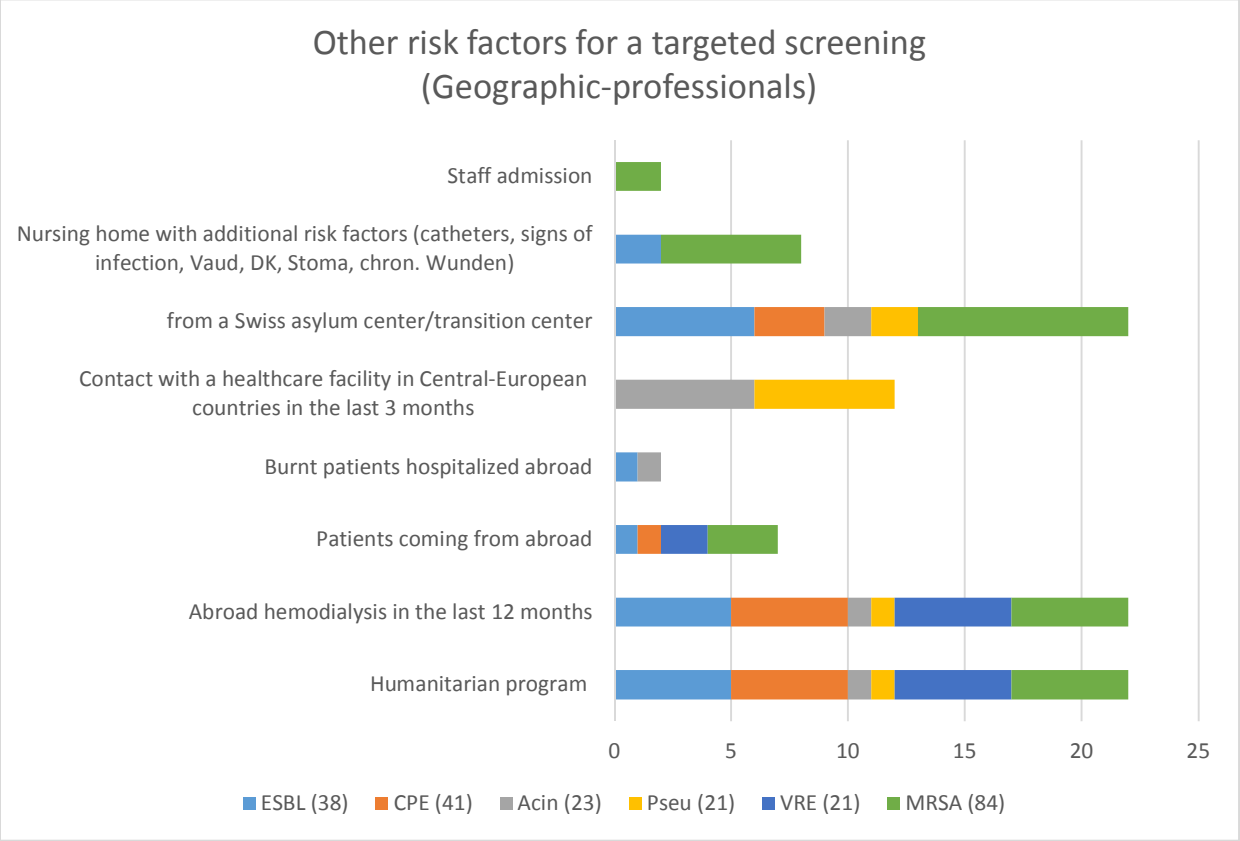



***Appendix figure** 13. Other risk factors for a targeted screening*

** (n) Number of other risk factors selected for each pathogen.*

** Many respondents answered for multiple risk factors.*

** Data were manually synthetized based on respondents comments*

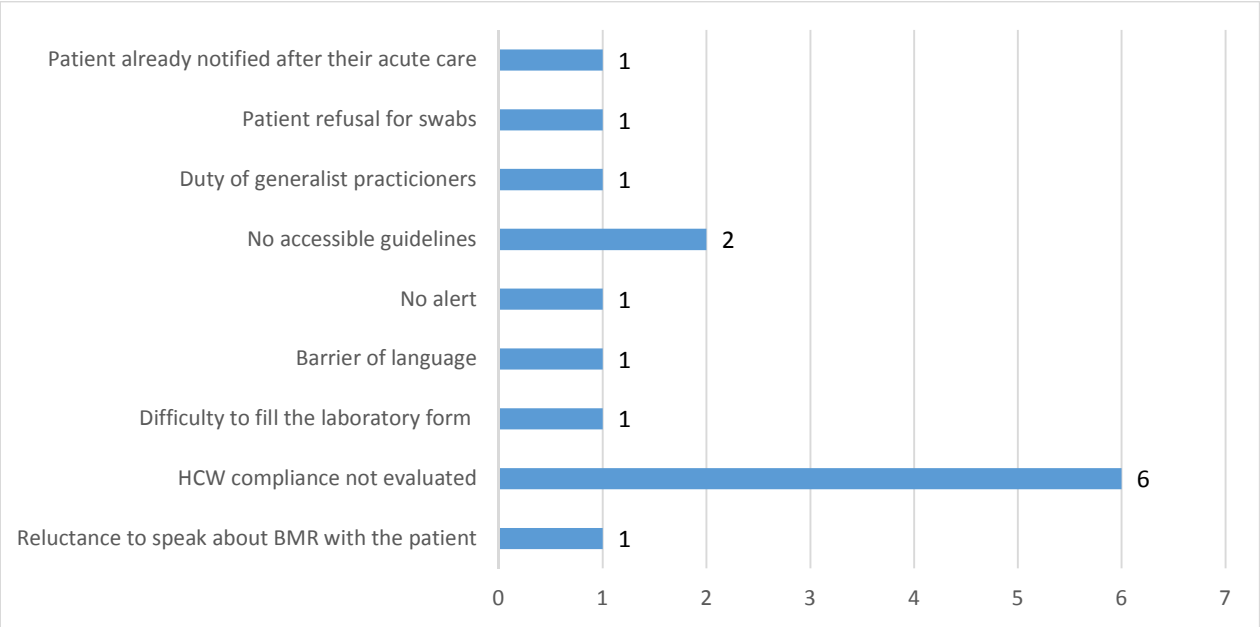



***Appendix f****igure 14. Other risk factors for a targeted screening (2)*

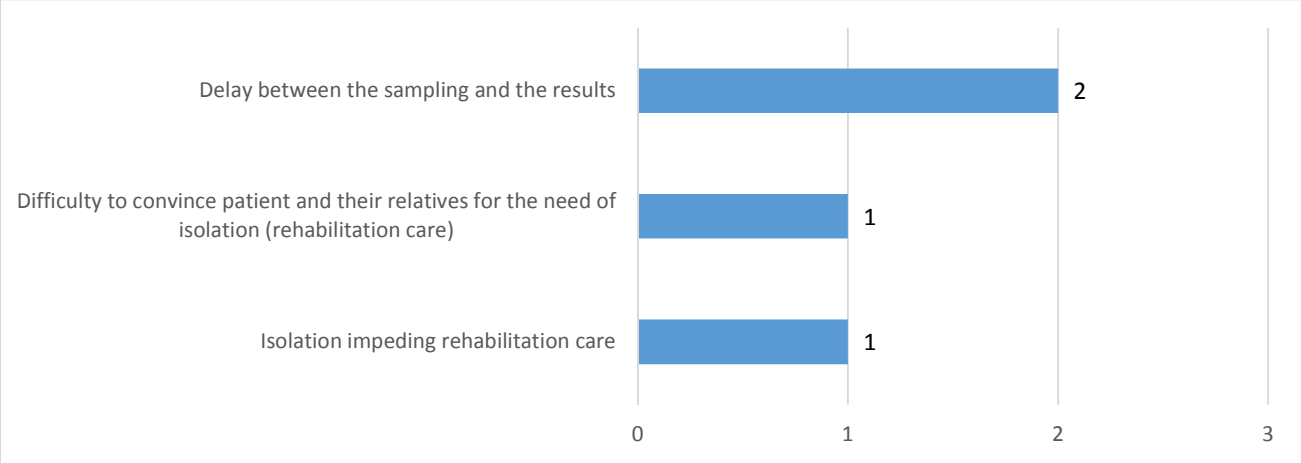
** (n) Number of other risk factors selected for each pathogen.*

** Many respondents answered multiple risk factor.*

** Data were manually synthetized based on respondents comments*




*Appendix figure 15. Other screening-related problems faced to implement MDRO screening at admission (n)*
** Data were manually synthetized based on respondents comments*




*Appendix figure 16. Other isolation-related problems faced to implement MDRO screening at admission (n)*
** Data were manually synthetized based on respondents comments*

# Appendix (tables)

Appendix table 1: Other respondent functions

| Other respondent functions* | |
|---|---|
| 1 | Chargée Swissnoso |
| 1 | Directrice adjointe des soins -infirmiere PCI |
| 1 | EPIAS Experte fédérale en prévention des infections associées aux soins |
| 1 | Co directrice des soins |
| 1 | Leiterin Qualitsmanagement |
| 1 | Geschäftsleitung, Klinischer Leiter |
| 1 | Verwalterin |
| 1 | Direktor |
| 1 | Leitung interdisziplinäre Dienste |
| 1 | Leitung Operationsabteilung/Beraterin für Spitalhygiene |

* N*umber are based on the respondent number and not institution number.*

** Data were manually synthetized based on respondents comments*

** n= 180*

Appendix table 2: MDROs concerned by the universal screening in units (n)

| MDROs concerned by the universal screening in units, n (%)* | |
|---|---|
| BLSE | 11 (79) |
| CPE | 10 (71) |
| Acinetobacter | 5 (36) |
| Pseudomonas | 7 (50) |
| VRE | 6 (43) |
| MRSA | 11 (79) |

**n tot= 14*

**Appendix t**able 3. Units implementing a targeted admission screening

| Specific units | MDROs concerned by the targeted screening | | | | | |
|---|---|---|---|---|---|---|
| | ESBL | CPE | Acinetobacter | Pseudomonas | VRE | MRSA |
| All direct transfers for surgery and medicine. Except for patients coming from abroad who require a medical hotel program and decide for a surgery | 1 | 1 | 1 | 1 | 1 | 1 |
| Dialysis; also in medicine and surgery according to the risk profile | 1 | 1 | 1 | 1 | 1 | |
| Internal medicine | 1 | 1 | | | 1 | 1 |
| In all acute-care units (not in ambulatory care) | 1 | 1 | | | | 1 |
| Transplant unit, MEDISO Leukemia | | | 1 | 1 | | |

** Data were manually synthetized based on respondents comments*

Appendix table 4. Respondents' suggestions

| |
|---|
| Un guideline commun serait le bienvenu |
| Directive nationale |
| Nous suivons les directives cantonales HPCI-Vaud. |
| Groupe de travail avec recommandations |
| Une recommandation générale pour uniformiser les pratiques serait bien utile merci<br>Un message du médecin cantonal, voir mieux de l'OFSP, pourrait peut-être augmenter la compliance à ce type de dépistage. |
| Raccomandazioni nazionali emanate da Swissnoso |
| Renderla obbligatoria per ogni paziente estero che accede a cure in Svizzera |
| Vereinheitlichung ist grundsätzlich eine gute Idee; möglichst einfaches Konzept; nicht zu viel wollen, da die Prävalenz von MRB in kleineren und mittleren Spitälern (noch) gering ist in der Schweiz; ev. Unterscheidung der Konzepte für Tertiärspitäler und Primär-/Sekundärzentren (aber wiederum höchstens 2 Kategorien, damit es nicht zu kompliziert wird). |
| Wie z.B. in den Niederlanden, Vor bzw. bei Eintritt "isolieren" und wenn negativ dann auf die Abteilung |
| Durchführung von einem Labor schweizweit durchführen lassen. |
| Nationale Richtlinien in Bezug auf Isolation (ob überhaupt und welcher Art) und Abstrichorte. |
| Eine Universitätseinrichtung sollte vom BAG/Bund mit mehreren qualifizierten Hygienefachpersonen ausgestattet werden, um für die CH gültige Gesamtrichtlinien zu formulieren. Herausgabe dann für alle als Verordnung (Gesetzescharakter). |
| klare gesetzliche Vorgaben |
| Expertengremium welches dies entsprechend festlegt, mit einer Verpflichtung für alle Institutionen im Gesundheitswesen |
| Wenn eine Regelung der Kostenübernahme und das vorhanden sein von genügend optimalen Räumlichkeiten vorhanden wäre, könnte dies zu einer Vereinfachung führen. Noch mehr schnelle mikrobiologische Resultate, was ja zum Teil schon machbar ist |
| Standardisiertes Procedere über Fachgesellschaften organisiert |
| Vergütung des Aufwandes des Labors |
| Leitlinien |
| Bereits eine Einheitliche Schweizer Richtlinie würde sehr weiterheilfen Schulungen? Optimierung Informatik ( bereits in anderen Spitälern positiv getestete Patienten erkennen? ) |
| Ich empfehle von einer Vereinheitlichung abzusehen. Die Relevanz bzw. Prävalenz in jedem Spital sollte berücksichtigt und jeweils vor Ort mit den Verantwortlichen unter Einbezug eines Gold-Standards festgelegt werden. |
| Aus Kostengründen immer gepoolte Screenings. |
| Kolonisationen / Infektionen mit MRB VOR Verlegungen mitteilen bzw abfragen (Info meist nicht verfügbar) |
| Klare Richtlinien, wie man dabei vorgehen sollte und klare Richtlinien auch für das Labor, wie sie dabei vorgehen sollen. Der Grund, das wir bis anhin keine Carbapenemasen routinemässig screenen bei Repatrierungen, ist die bis anhin fehlende Kapazität unseres Mikrobiologielabors. |
| Vereinheitlichung, da verschiedene Richtlinien in einzelnen Spitälern |
| Einwegtests |
| Gesetzliche Richtlinien |
| Vereinheitlichung, klare Richtlinien |
| Eintrittsscreening obligatorisch für alle Patienten Ausland mit Spitalaufenthalt MRSA Rachen/Nase und inguinal VRE rektal/inguinal Multiresistente gramnegative Erreger inguinal, Urin, rektal --> falls intubiert oder respiratorische Beschwerden Sputum/Trachalsekret Dauer Ausland-Spitalaufenthalt zu Hospitalisation CH schwierig zu definieren, gemäss Daten gesunde Reiserückkehrer mit GNS-ESBL mind.-Dauer (6-)12 Monate (sehr aufwändig) |
| Einheitliche Regelung durch Swiss Noso mit einheitlichem Tool (z.B. Datenbank für SSI) |

Eine einheitliche Richtlinie für das Vorgehen für alle Schweizer Spitäler wäre sehr hilfreich und würde wahrscheinlich auch weniger Unsicherheit stiften.
Risikofaktoren vorgeben, ggf ein Fragebogen für die Patienten erstellen, womit man die Risikofaktoren abfragen und erkennen kann.
Die Multiresistenz ist schlecht definiert und die Frage danach führt oft zu Verwirrung. Zudem hängt die Einschätzung stark davon ab, welche Antibiotika genau getestet wurden (z.B. wieviele und welche Aminoglykoside wurden getestet ?). Und letztlich ist die Einschätzung nur möglich, wenn die gesamte Resistenztestung bekannt ist, nicht nur das, was auf dem herausgegeben Befund steht. Und die Einschätzung erfordert zudem ein fortgeschrittenes infektiologisch/mikrobiologisches Wissen. Dieses ist in kleinen Spitälern oft nicht vorhanden. Gefragt sind einfach anwendbare Lösungen.

Schema UniversitätsSpital Zürich finde ich gut anwendbar und könnte für die ganze Schweiz übernommen werden.
Harmonisierung Screening- Praxis ganze Schweiz, einfach umsetzbare Empfehlungen für alle MRB, die auch in Häusern mit tiefer Prävalenz einfach umsetzbar sind MRB- Befund und Massnahmen bei Verlegungen innerhalb der Schweiz bekannt- Vermeidung von Doppelscreenings, einheitliche Strategie fürs Screening und die entsprechenden internen Massnahmen z.B: Isolation, Wiederholung des Screenings, Markierung im System für spätere Hospitalisationen

Jeder (!) Patient soll bei Eintritt gescreent werden!

Durch nationale Richtlinien für Indikation Screening und Management von MRB

Gesamtschweizerische Standards

Eine übergeordnete Empfehlung/Richtlinie wäre sehr wünschenswert und würde vieles vereinfachen.

Eine nationale Richtlinie/Empfehlung Einheitliche Vergütung Nationale Empfehlung über die zu treffen Massnahmen

ich denke, Rehakliniken ohne Akutauftrag müssten nicht ein 100%-Screening durchführen

Standardisierte Anamnese, vermehrte Sensibilisierung, Eintrittsformular für Pat. ist Aufenthalt im Spital in den Risikogebieten erwähnt

Verbindliche Richtlinie wird vom BAG / SGSH / SwissNOSO herausgegeben

Nationale Empfehlungen, mit der Option der Spitäler, begründet von den Empfehlungen abweichen zu können

Appendix table 5. Respondents' comments on the survey

| Comments from the respondents |
| --- |
| Merci |
| Questionnaires / affiches dans plusieurs langues |
| Nous sommes actuellement en train de revoir les indications et pratiques de dépistage des BMR dans l'institution; notamment en créant un document pour les dépistages et en revoyant les recommandations. |
| Nous restons à disposition pour toutes suggestions de votre part, cordiales salutations. |
| Creer une carte santé pour chaque cytoyen, sur laquelle non seulement on retrouve les examens de laboratoire et radiologique fait ailleurs, mais aussi le résultat de dépistage faits dans d'autre hôpitaux, et auxquels on a pas forcement l'accès. |
| Good job, thanks! |
| Eseguiamo la ricerca dei germi MDR's dal 2012 in tutti i pazienti esteri che accedono alla ns. clinica di riabilitazione. I pazienti esteri sono prevalentemente neurologici. Dal 2012, la ricerca dei MDR's eseguita su 167 pazienti ha individuato che il 44% dei pazienti è positivo per uno o più germi multiresistenti.di questi pazienti, 17 erano colonizzati con CPE. |
| Wir übernehmen sehr selten Pat. direkt aus "Risiko-Spitälern" (z.B. Ausland, Genf). Diese werden meist schon vom Zuweiser-Spital gescreent. |
| s.o. |
| Es wäre wünschenswert, dass die Krankenversicherungen nicht nur für Behandlung von Infektionen, aber auch die Kosten für Infektionsprävention, wie z. B. Eintrittsscreening übernehmen würden. |
| wichtig ist eine einheitliche Definition von MRE: 3/5 AB-Klassen (nur Genta, irgendein Aminoglycosid?). Sonst werden Verlegungen schwierig. |
| Patienten treten bei uns mittels Anmeldeverfahren ein, es gibt keine Notfall-Eintritte. Somit haben wir meist genügend Zeit vor Eintritt ein Screening zu verlangen |
| Problematik mit Konsequenzen bei Isolation im Falle von Eintrittsscreening |
| Auch eine einheitliche Vorgehensweisse in allen Schweizer Spitälern bezüglich Isolationsmassnahmen wäre sehr wünschenswert. |
| Wenn im Akutspital "irgendetwas" gefunden wurde, wird bei uns isoliert bzw. weiterhin mit Abstrichen gearbeitet |
| Eine Vereinheitlichung wäre wünschenswert, ich wäre aber froh, wenn entsprechende Unterschiede zwischen Kindern und Erwachsenen berücksichtigt würden. |
| Eine einheitliche Regelung würde ich begrüssen. Sie müsste unbedingt die Situation der peripheren Spitäler berücksichtigen. |