

Medication in hospice care – an initial data analysis in Swiss hospices and hospice-like institutions, focusing on off-label use and subcutaneous administration

DAS GANZE LEBEN



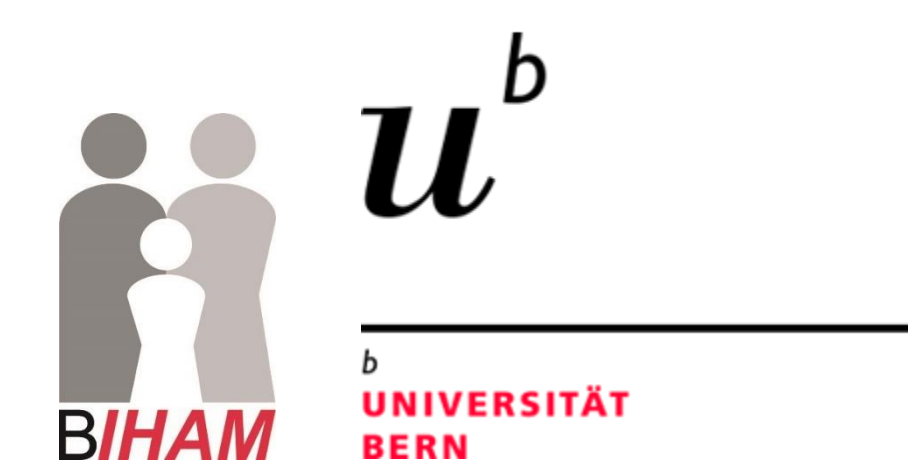
**HOSPIZ
ZENTRALSCHWEIZ**
PALLIATIVE CARE

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BACKGROUND

Early detection and reduction of symptoms in patients with an incurable, life-threatening and/or chronic illness are essential in palliative care, where off-label use and subcutaneous drug administration are common.

To what extent these practices are relevant in Switzerland has not yet been investigated.

OBJECTIVES

- The primary objective of this thesis was to obtain an overview of the medication use (process) in Swiss hospices and hospice-like institutions (SHIs) to identify challenges and information gaps.
- The secondary objective was to gather information about activities of pharmacists in this setting.

METHODS

- We conducted a survey in SHIs, consisting of three parts with different target audiences
A: directors,
B: nursing management
C: head physicians.
- Based on the survey results, we performed a structured literature search on subcutaneous, off-label medications used in SHIs.

1.3 Subcutaneous medication use in SHIs

Active substance	Approved by Swissmedic for subcutaneous use?	Institutions using this active substance subcutaneously (according to part B) [n, %]
Morphine	yes, for s.c. injection	8 (100.0%)
Haloperidol	no	7 (87.5%)
Midazolam	no	6 (75.0%)
Metoclopramide	no	5 (62.5%)
Butylscopolamine	yes, for s.c. injection	5 (62.5%)
Levomopromazine	no	3 (37.5%)
Hydromorphone	yes, for s.c. injection and s.c. infusion	3 (37.5%)
Methadone	yes, for s.c. injection	2 (25.0%)
Dexamethasone	yes, for s.c. injection	2 (25.0%)
Fentanyl	no	1 (12.5%)
Clonazepam	no	1 (12.5%)
Metamizol	no	1 (12.5%)
Ocreotide	yes, for s.c. injection	1 (12.5%)

+ identified desire for information on s.c. drug administration of proton pump inhibitors (PPIs)

RESULTS

Of the eight surveys sent out, the response rate was as follows:
7 with completed part A (87.5%), 8 with part B (100%) and 6 with part C (75%).

1.1 Demographic information of participating institutions

Institution	Number of beds; specialized palliative care	Average patient age [years]	% of patients below retirement age (women 64, men 65 years)	Average length of stay in 2020	Shortest length of stay in 2020	Longest length of stay in 2020
1	4	70	30-40%	21 days	1 day	11 months
2	4	72	23% men 11% women	40 days	2 days	184 days
3	5	68	30%	21.5 days	2 days	240 days
4	7	68 (2020) 66 (2019)	40% (2020) 44% (2019)	25 days	15 minutes	13 months
5	10	unknown	25%	1-3 weeks	< 1 hours	366 days
6	12	73	23%	24 days	1 day	7 months
7	14	65	unknown	unknown	unknown	unknown

1.2 Collaboration with pharmacists – activities in 2 or more institutions

Activity	Answers [%]	Answers [n]
Medication supply	100.0	7
Support in choosing alternatives to drugs no longer marketed or out-of-stock	100.0	7
Medication waste management	100.0	7
Answering medication-related questions (e.g. compatibility, divisibility, stability)	57.1	4
Interaction check	42.9	3
General "medication information"	42.9	3
Person responsible for an institution	42.9	3
Extemporaneous formulation	42.9	3
Support in choosing alternative routes of administration (e.g., in case of impossible oral application, etc.)	42.9	3
Recommendations on actions in case of interactions	28.6	2
Identification of potentially inappropriate medications	28.6	2

2. Literature-based information on subcutaneous administration

- Number of relevant publications identified: 57
- observational studies: 47 (mainly case series and case reports)
- interventional studies: 10
- Most commonly researched active substances

Active substance	Number of studies	Information on tolerance	Information on serum/plasma levels
<i>Most commonly researched active substances (out of a total of N=17 drugs represented in included studies)</i>			
Midazolam	14	local and systemic	yes
Haloperidol	8	local and systemic	no
Levetiracetam	8	local and systemic	yes
Furosemide	7	local	no
Ketamine	7	local and systemic	no
Fentanyl	5	local and systemic	yes
Levomopromazine	5	local and systemic	no
Metoclopramide	5	local and systemic	no
Ondansetron	4	local	yes

➤ Missing info on Clonazepam, Codeine

DISCUSSION & CONCLUSIONS

This thesis provides an initial overview of medication use in SHIs. It establishes a basis for further research in this area.

- There is a great need for action to simplify the handling of off-label drug use in palliative care and to close existing information gaps.
- Studies on the efficacy and safety of off-label applications and improved interprofessional networks are needed.
- For pharmacists to contribute to medication safety in hospices providing their in-depth knowledge on medications, it is essential to train them on drug therapy in palliative care.

Literature

Rémi C, et al. Palliativpharmazie: Der Apotheker im Palliative Care Team. 1. Auflage. Stuttgart: Deutscher Apotheker Verlag; 2017.

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