# Feasibility Study of a Multidimensional Clinical Decision Support System in Palliative Care among General Healthcare Providers

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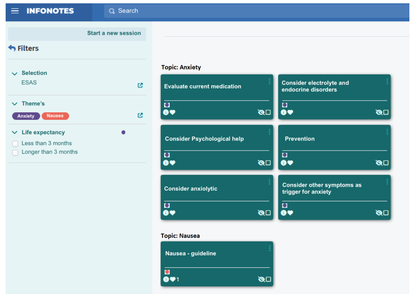
## Background

- Most patients in palliative care experience multiple symptoms at once
- General Healthcare Providers (GHCPs), without formal palliative care training, often provide suboptimal symptom management due to lack of time, experience, and a structured approach
- Existing guidelines do not address symptom interactions and often provide one-size-fits-all advice
- Clinical Decision Support Systems (CDSS) have proven effectiveness in symptom management

## Methods/Methodology

- The **MuSt-PC tool** (Multidimensional Strategy for Palliative Care) was developed, a CDSS intended to support GHCPs in structured symptom assessment and to set up a management plan
- The Dutch version of the Edmonton Symptom Assessment Scale (ESAS, so called Utrecht Symptom Diary – 4 Dimensional) was used for structured symptom assessments
- Recommendations for symptom management were based on the Dutch palliative care guidelines
- GHCPs from primary care and hospitals were invited to use the MuSt-PC and asked to evaluate the MuSt-PC tool


## AIM:

**Explore GHCPs' willingness to use a Clinical Decision Support System (CDSS) for structured, multidimensional symptom management in palliative care**

## Participants

| General characteristics | Study completed (n=42) | Study not completed (n=28) |
|---|---|---|
| **Profession, n (%)** | | |
| **General Practioner** | 2 (4.8) | 6 (21.4) |
| **Medical specialist** | 6 (14.3) | 4 (14.3) |
| **Nurse practitioners/Physician Assistant** | 17 (40.5) | 3 (10.7) |
| **Resident** | 17 (40.5) | 15 (53.6) |
| **Gender, n (%)** | | |
| **Female** | 28 (66.7) | |
| **Age (median, range) years** | 35 (27 – 56) | |
| **Hospital department, n (%)** | | |
| **Pulmonology** | 8 (19.0) | |
| **Oncology** | 22 (52.4) | |
| **Geriatrics** | 6 (14.3) | |
| **Other** | 3 (7.2) | |
| **Years of experience in current position, (median, range) years** | 6 (0 – 26) | |
| **Affinity with palliative care* (median, range)** | 8 (3 – 10) | |

*** Affinity was measured on a scale from 0 to 10, where 0 indicates no affinity and 10 indicates high affinity.**

## References

1. van der Stap L, de Heij AH, van der Heide A, Reyners AKL, van der Linden YM. Barriers and facilitators to multidimensional symptom management in palliative care: A focus group study among patient representatives and clinicians. Palliat Support Care. 2023;21:616-627.
2. van der Stap L, de Heij AH, van der Heide A, Reyners AK, van der Linden YM. Clinical decision support system to optimise symptom management in palliative medicine: focus group study. BMJ Support Palliat Care. 2023;13:e397-e407.

## Results

- 70 GHCPs were included of whom 42 (60%) completed the evaluation. Those GHCPs used the MuSt-PC tool 202 times (median 4 times).

**While using the MuSt-PC tool:**

- **71% described benefits:**
  Increased awareness of co-occurrence of multiple symptoms
  Better systematic symptom assessment
  Helpful recommendations for symptom management
- **61% also described challenges:**
  Extra time during consultations
  Learning curve
- **Suggestion for improvement were:**
  More concise overview of recommendations
  Sequential plan for easier use
  Integration with Electronic Medical Record

## Conclusions

- **The MuSt-PC tool can support GHCPs by enhancing symptom assessment and providing valuable management recommendations**
- **Further improvements based on participant feedback and the use of innovative technology will make it applicable in daily practice, increasing willingness to use it beyond the 60% achieved in our study**

**Try the MuSt-PC!**

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