Rejected or returned referrals from general practice, causes and consequences

Supplementary:

Inclusion criteria for general practitioner liaisons.

Inclusion criteria:

The total number of GP liaison officers in Region of Southern Denmark is 36 All 36 GP liaison officers were invited; the first 20 who signed up were interviewed. The inclusion was stopped upon:

- Inclusion of liaisons from all hospitals,
- Achieving a range of liaisons' experience between 3 and 15 years,
- Equal gender distribution,
- Representation from single handed and partnership practices,
- Data saturation confirmed

Demographics of participating liaison officers

A total of 20 GP liaison officers participated in the study.

The gender distribution was evenly split, with 10 males and 10 females.

Among the participants, both single practitioners and partners of partnerships were represented. The numbers are not disclosed due confidential concerns.

The mean age of the participants was 54 years. The mean duration of experience as liaison officers was 8.5 years, with a range of more than 20 years. The exact numbers are not disclosed due confidential concerns.

All five hospitals in the Region of Southern Denmark were represented in the study

Extended description of setting:

In Denmark most healthcare services are tax-funded. General practice is the first-line provider of most types of healthcare and GPs serves as the patients' primary contact for healthcare inquiries, referrals, and coordination between primary and specialized care. All outpatient hospital treatment requires a referral mostly issued by the GPs. A prerequisite for filling this role, is good collaboration between all actors in the healthcare systems. Virtually all citizens are listed with a general practice.

In 2001 a General Practice Liaison Officers Scheme was introduced in the agreement between the GPs and the public health contractor. It comprises GPs who are part time employed at the hospitals to improve collaboration with general practice ensuring good and coherent patient pathways. They are therefore typically involved in addressing issues with referrals. The liaison doctors meet regularly with hospital departments chief physicians. leadership are known by the GPs and easily accessible. By January 1st, 2024, there were 36 GP liaison officers in the Region of Southern

Qualitative data analysis in details:

The analysis followed systematic text analysis as described by Malterud. Although the analysis is described as consisting if four steps, the process was not linear; instead it involved going back and forth between the steps as new insights emerged.

In step 1, an overview of data was established by reading the compiled text to gain a general impression of the entire material, after which two authors (ME, NK) generated preliminary themes used as "road signs" for the analysis.

In Step 2, ME and NK systematically reviewed the transcripts line by line to identify meaning units containing information about the causes and consequences of referral returns. Each identified meaning unit was coded with a descriptive label and sorted in relation to the preliminary themes. Additional text not obviously in line with preliminary themes were code in a residual code group

In Step 3, the codes identified in Step 2 were grouped into subthemes, reviewed, and abstracted by rewriting their content to capture underlying meanings more precisely.

In Step 4, the themes and subthemes were further developed through reflective discussions among all authors, ensuring that the overall findings remained valid and preserved the integrity of their original context. The residual code group was reviewed again to challenge our final themes and subthemes

See Figure 1 in the main document.

The first 16 interviews were analysed before the final four to test it there should be additional information occurred in the final interviews ensuring data saturation. All data, analyses, and interpretations were then discussed between the authors ME, NK, JL, CBM, all experienced clinicians and researchers representing both general practice and hospitals.

Danish Referral procedure

All referrals are sent digitally via Medcom standard charts. MedCom is a nonprofit organization that develops and maintains standards and systems for the healthcare sector in Denmark. MedCom facilitates collaboration between authorities, organizations, and private companies associated with the Danish healthcare sector. All referrals are triaged by physicians without digital assistance. At triage it is decided which type of specialist and a priori investigations the patient is offered, the accepted waiting time, or if the referral is instead returned.

The interview guide

Interview guide for a 15-30 minute telephone interview with GP liaisons officers at hospital departments in the Southern Region of Denmark.

"Information about purpose, ethics, the researchers, data security, and consent"

Questions:

- 1. What is your seniority as a practice consultant?
- 2. Do you receive inquiries from colleagues regarding rejected referrals? If yes, what do they tell you?
- 3. Have you discussed "returned referrals" with the department management? If so, can you briefly describe your conclusions?
- 4. Do you have the impression that the issue of "returned referrals" is increasing, decreasing, or stable?
- 5. Looking back over the past two years, can you provide examples of typical issues with "returned referrals"?
- 6. Is the handling of referrals in your department consistent, or do you have the impression that there is some variation between the triaging consultants, if the role is shared by multiple individuals?
- 7. Have there been any new rules/guidelines/procedures for handling referrals in your area in recent years that may have affected the number of returns?
- 8. Do you have the impression that it is a specific group of practices in your area affected by "returned referrals," or do you feel that it is something most practices experience relatively regularly?
- 9. What happens after a referral is returned, in your opinion? Is the patient referred again, possibly with a more detailed referral? Or is the patient referred to another department/private provider/other? Or is the patient's problem handled by their GP?
- 10. How do you think "returned referrals" affect future referrals from general practice? Do they improve? Are they sent elsewhere? Are referrals withheld in similar cases?
- 11. What is your impression of the current scale of the problem in your department from the perspective of general practice? From the hospital's perspective? (On a scale from 1-9, where 1 = no problem, 9 = very big problem)
- 12. How do "returned" referrals affect the collaboration between general practice and the hospital?
- 13. Do you have anything else you'd like to share?