

## **Can an elephant crack a nut with a sledge hammer? How physicians cross boundaries between hospitals and primary care clinics**

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### **The problem**

In this chapter we analyze the working of a Transitional Incident Prevention Program (TIPP) designed to improve the safety of patients during their transition between primary and hospital care. We systematically describe what the TIPP entails and how its elements link to the outcomes of the program achieved so far (Mayne 2010, Dixon-Woods 2011).

Recent years have seen the development and implementation of tools aimed at improving the patient's transition in referral or discharge between home and hospital. These tools include case managers, transition coaches, medication reconciliation, follow up phone calls, accessible digital medical records for patients, communication protocols such as ISBAR, discharge guidelines and referral guidelines (Naylor 2000, Coleman 2006, Jack 2009, Snow 2009, Scotten 2015, Buurman 2016). However, the fidelity of interventions and their outcomes (e.g., 30-day readmission rates) is often variable and sub-optimal (Hansen 2011, Jayakody 2016, Kansagara 2016, Brewster 2016). Given limited resources available to develop and sustain safe systems – such as shared electronic records – the information exchange between general practitioners and hospital specialists and staff is often inadequate (Berendsen 2009, Gobel 2012, Jones 2015). Consequently, the follow-up to a referral or discharge remains uncertain. For example, GPs do not know if their referral instructions are being heeded, while hospital specialists continue monitoring patients after discharge as they are not sure that GPs are following their own instructions.

Despite all the patient-safety initiatives, the safety of patient transitions depends – and will continue to depend – at least in part upon personal contact between GPs, hospital specialists and their respective staffs (Wijngaarden 2006). (Wijngaarden 2006) It depends, for example, on whether a hospital physician will call the GP if a referral letter is late or unclear. It is contingent on whether physicians know each

other well enough to give feedback on a flawed transition. In short, direct communication depends upon informal relationships (Cott 1997, Anthony 2003).

**Our approach**

Several relevant concepts touch on measures to develop informal relationships and improve direct communication, such as the generative safety culture, learning organization and reflexive professionals (see Table 1). Safety culture refers not only to the awareness for safety, but also to hierarchical flexibility, such as respect for the GP who points out mistakes made in a patient’s transition, or whether adverse incidents can be disclosed without sanctions (Zwart 2011). Organizational learning is different as it focuses upon change (Wijngaarden 2006). Learning, defined as improving performance, is a change mechanism which professionals can use to give direction to change and ensure compliance to rules. Learning requires proximity, be it physical, task, professional or social proximity. In other words, learning becomes easier when place, status, language and mental images are similar.

We prefer the concept of reflexivity, defined as the capacity of a team to monitor and change events, behavior and contexts (Lynch 2000, Iedema 2011). Individuals who work together discuss how they work, share their perceptions of what they see and exchange the solutions they believe in (Carroll, Iedema et al. 2008, Mesman 2011). Note: reflexivity is open-ended. Its focus is diffuse: any practice and any variation to the rules can be explored. Thus, it does not focus particularly on the elements of safety systems or indeed on change. It focuses on everyday performance and adjustments in that performance that create acceptable outcomes for the system (Hollnagel 2006).

Table 1. Concepts that shaped measures designed to improve personal relationships and enhance safety

Concept	Safety Culture	Organizational Learning	Reflexivity
Focus	Awareness	change	Everyday performance
Mechanism	A focus upon safety drives performance	Professionals give direction to change	Variation drives better performance

### **The transitional safety program**

In 2012 we designed a transitional safety program based on reflexivity (Melle, Zwart et al. 2015) which we implemented from 2013 onwards. The aim of the program was to understand how physicians move competently within primary care centers and hospitals providing safe care. Physicians should – after completing the program – demonstrate an awareness of and responsiveness to the system of patient transition. The key question was whether informal relations that enhance direct communication – and are prerequisites for reflexivity – can be created in a short period of time and can be used to focus on the safety of patient transitions. The program will generate tools for primary care centers and hospitals to improve transitional safety.

We involved three hospitals and their referring primary care centers (see Table 2) in our Transitional Incident Prevention Program. We selected two disciplines in the hospitals, gastroenterology and cardiology since both frequently have patients transitioning to and from primary care clinics. Moreover, direct referrals from primary care centers to these departments in teaching hospitals are common. Lastly, these disciplines offer both acute care and chronic care delivery along with primary care.

Table 2. TIPP participants

<b>Hospitals</b>	<b>Primary care centers</b>
A general hospital in a small town in the north of the Netherlands (197 beds) delivering secondary care	18 referring primary care centers in the rural region
General teaching hospital (381 beds) delivering secondary care in one of the four main cities in the Netherlands	44 referring primary care centers in the city and surrounding suburbs
An academic teaching hospital (1042 beds) delivering secondary and tertiary care in one of the four main cities in the Netherlands (same as above)	

In this section we describe the program, linking its elements to the outcomes we have achieved to date (see Table 3). To do this linking, we reflected with the project team on how the original study protocol developed over time (Melle, Zwart et al. 2015). The project team consisted of three GPs, two epidemiologists and one social scientist. In addition to our team reflection, we interviewed hospital specialists and GPs about their experiences with the program, both individually and in focus groups.

Table 3. TIPP elements

<b>Baseline measures (used in reflexivity discussion)</b>	<b>Facilitators of reflexivity</b>	<b>Proposed interventions</b>
Review of the scientific literature  Identifying transitional incidents via existing reporting systems,  Regional patient survey  Regional health care provider survey	Joint discussion meeting on evidence of regional transitional safety  Multidisciplinary project group meetings  Start transitional incident reporting and mutual root cause analysis of transitional incidents  Practice exchange visits	Group consultations for patients handed over from cardiologist to general practitioner for follow up  Safe email communication/ improvement of referral and discharge letters via <i>Zorgdomein</i> <sup>1</sup>  Development and implementation of patient info card, medication passports

### **Evidence-based reflexivity for transitional safety**

In our TIPP, we assessed transitional risks with the aim of developing and implementing safety management measures. First we reviewed the scientific literature and made summaries of the known risks of patients' transitions to present to the physicians. As evidence is collected in international health care systems differently than in the Dutch system, we collected additional local data with two surveys: one for professionals and one for patients. The survey for professionals included questions concerning transitional safety, collaboration, communication, and incident reporting. The survey addressed relational -

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<sup>1</sup> *Zorgdomein* – translates as Care Domain -is an ICT application for general practitioners to refer patients to hospital specialists.

informational – and managerial continuity (Haggerty 2003). The survey for patients included questions on the relation with their physicians in both primary and secondary care, the exchange of information, and collaboration between the GP and specialists in the hospital.

We presented the results of the general and local risk assessments to the physicians and asked them to reflect on this evidence and share their experiences related to transitional safety. Together we reflected on how differently hospital physicians and GPs explain incidents. Hospital staff were mostly concerned with procedures that were either missing or not used. The GPs expressed their personal commitment to their patients and their frustration at not being able to oversee what was happening to ‘their’ patient.

*“The referrals are just not clear and I don’t have a clue whether GPs actually see how the referral system is setup. For example, patients with shoulder pain... The GP’s main concern is to get these patient seen in hospital, and they don’t really care who gets to see them ... So, this patient will see an orthopedist or even a rheumatologist, who will treat them for their painful shoulder for a year or two. This, despite the fact that there is an excellent guideline for chronic shoulder pain that states there is practically never an indication for surgery. These patients get operated on and only then do they come and see us. That’s such a pity, since they’ve lost a lot of time and missed out on lots of other options.” (Physician, hospital 1)*

Versus:

*“Well, one thing still makes me mad. We requested an X-ray for a child. She had Ewing’s sarcoma, which is a severe condition and my colleague asked for two X-rays. The radiology department decided to do just the one. They didn’t bother to tell the doctor about this, they just took one x-ray, not of the right part, and this led to a couple of weeks’ delay before the right diagnosis was made. (...)The complicated communication with the hospital is what I find the most irritating. First, we can’t find out who took the decision and if they even consulted a radiologist. You just don’t know how it went. I consulted with the pediatrician and he reported the incident and said he would discuss it with the radiologist and he would get back to me. I ended up calling twice but it still stayed unresolved. This was frustrating for the mother, but for us too.*

*I think it's really an example of something you can't get a grip on. I really regret I happening." (General practitioner in the catchment area of hospital 2 and 3)*

Between 2012 and 2016, we asked the internal medicine and cardiology staffs and all members of the GP practices every fourth month to report on any transitional incidents for one week. The project team trained the staff to recognize transitional incidents by giving detailed examples (see Box 1), presenting local risk data and holding reflexive meetings on transitional safety. In addition, the project team initiated analyses of transitional incidents reported for both hospitals and GP practices by the stakeholders involved.

Box 1. Examples of transitional incidents

Palliative patient in severe pain requests to be discharged on Friday afternoon; the hospital does not pass on information or instructions from the responsible anesthetist to the GP.
A patient with known heart failure visits the GP presenting minor decompensation. GP starts bumetanide, although the patient already has furosemide prescribed by the cardiologist. Four months later, the cardiologist discovers the double medication. The patient has lost a lot of weight and is already slightly dehydrated.
Elderly patient does not want treatment or admission; she suffers from dyspnoe and is admitted to the hospital; she passes away in the hospital instead of at home (which she had wanted)
A patient diagnosed with untreatable liver carcinoma visits the GP for mental support and additional information. The GP was not informed by the cardiologist about the diagnosis.
A patient is diagnosed with abdominal aortic aneurysm. The GP is not informed about the diagnosis. The patient visits the GP for pain in his back. The GP does not recognize this pain as a symptom of a ruptured aneurysm in time. The patient dies.

Because the participants were hesitant to report incidents, we added additional reflexivity meetings. The physicians felt dissatisfied and discouraged with the data they already had on the risks and recurrence of incidents in both the hospital and the GP's practice. "What to do when up to 20 patients a week get harmed because their discharge letter is missing and no one cares?" (Physician, hospital 3). In the TIPP, the physicians met each other at project meetings, in a transitional safety workshop, and over dinner, etc.

We started each meeting with a presentation of new data on identified risks or incidents. Posing open questions on social, cultural and political issues, we opened up discussions on what it takes to get to know a patient, for example, and whether and how one can take personal responsibility for the transition of a single patient.

At the end of the program, hospital physicians shadowed GPs for a day and in turn, the GPs shadowed the hospital physicians for a day. The idea was to see the other at work and to see what the other does when he or she hands over a patient. According to the care providers in the project team, the transitional safety program enlarged the group of care providers who are worried about the risks associated with the transition of patients between healthcare organizations. It made more managers and physicians aware that the topic of transitional safety needs closer attention.

*Hospital physician: “How can I say this? It’s all about how we talk with each other.*

*Communication is key.”*

*Researcher: “Did the transitional safety program affect communication? Did it improve things?”*

*Hospital physician: “Hm, I doubt it. Not a lot.”*

*Researcher: “Not a lot...”*

*Hospital physician: “I think it created awareness. That was its impact. (...)”*

We discussed the meaning of awareness, why it is relevant and how to stimulate it.

*Researcher: “Is awareness enough? If so, what do you need to make it happen? Did we really have to do all that risk analysis, develop the trigger tool, organize and support incident reporting and arrange all these meetings? Or did we crack a nut with a sledgehammer?”*

*[long pause]*

*Cardiologist: “You are the mouse who danced with an elephant. The hospital hardly noticed [what you did].”*

The physicians did not expect that a new hand-over procedure – for instance, a mutual communicating format built into their electronic health records – would be developed soon, nor did they believe that any procedure in itself would solve the problem. In fact, they expected new procedures to spawn new problems. Discussing the topic of waiting for improvements triggered another discussion about what they could do to improve the safety of transitions without introducing new procedures or technology. They began by defining which incidents are acceptable and which incidents are not. One example was the GP’s referral letter with omissions or errors in the medication list sent to the hospital. At the start of the program, medication list errors was one of the issues that discouraged the physicians from addressing transitional safety. Reflexivity changed their perception of this problem, as the following quote shows.

*Hospital physician: “I shadowed a GP for a day and he visited me while I took care of my clinic. He also joined an oncology team meeting and could see how we collaborate in the hospital. The GP observed how I get referral letters, how I see my patients and what information I get. When I visited him he had invited some complicated patients. I was most impressed by what he has to do for his referral letters. I believe it is easier to assemble a car than to write a referral letter. GPs work with the system Zorgdomein. Out of a very long list of possible items, they have to select the items they want to include in their letter. (...) Now I fully understand why the medication lists GPs send me are seldom complete. It helps to know how the letter is composed. I no longer require a complete medication list from a GP. Knowing the problem, I can work around it.”*

And:

*GP in the catchment area of hospital 1: “I saw what happened to my carefully edited referral letter– properly laid out on my own computer – when it got to the computer of the gastroenterologist. It was stripped of any formatting that made it readable and that also made a complete mess of the current medication prescriptions. Seeing that, I could well understand why the GP’s reputation is not always so good in this hospital, sometimes even sloppy...”*

Better understanding the work flow and processes of the other enhanced a sense of community around transitional safety. Hospital physicians who know GPs, understand why GPs cannot provide a complete medication list. They see how the GP’s carefully composed referral letter changes on arrival at the hospital. They no longer blame the GP for the poor quality of the letter once it enters the hospital’s system. Moreover, they understand that asking for a complete list of medications would not solve the problem. Hence, they find other ways to complete the lists, such as asking patients and defining the exact risk of certain medications.

Still, some care providers did develop new procedures for transitions. For example, the cardiologists in one of the general hospitals set up group consultations where the cardiologist and GP jointly explained to small groups of invited patients how the GP would be handling their aftercare now that their hospital treatment was finished. Another measure was a card for patients on safe transition (Box 2), designed to remind patients what steps could be risky during the transition from home to hospital or vice versa, and to help them formulate questions about these issues.

Figure. Transitional safety tips for patients (chart will be sent separately. Please add translation as footnote to the picture)

1.	Be aware: your health care team may not have all the relevant information.
2.	Tell your health care team about all the medicines you are taking.
3.	Bring a family member or a friend with you when you meet your health care team.
4.	Know who you can contact in case you have questions or problems occur.
5.	Talk about any concern or question you have.
6.	Know the what, when, and where of the care or treatment you are about to receive.

### **Research reflections**

In this chapter we analyzed the working of a transitional safety program. Knowing that the transition of patients between primary care and hospital care is a complex system and that the resources for safety management are limited, our aim was to teach physicians how to move competently between primary care and hospital care. The TIPP focused on enhancing direct, personal communication between GPs and hospital physicians as a condition for improving transitional safety.

Like most safety programs, the TIPP began with risk analysis. Between the initial risk analysis and subsequent development of safety management measures, we included rounds of reflexivity sessions. Reflexivity enabled the physicians to understand and recognize transitional safety risks and become resilient. It fostered a dialogue on structural safety management measures that would improve daily processes as well as the participants' ability to be resilient to these risks in daily practice when no structural, adequate safety management measure is in place. In the program, physicians reflected upon everyday performance adjustments that prevent failures from happening and – just as important– create acceptable outcomes for patients. For example, an incomplete medication list or a missing referral letter became recognized as transitional safety problems, *shared* safety problems instead of just any old problem caused by poor performance and usually the fault of someone else on the other side. These problems became acceptable in the sense that physicians were willing and able to act upon the missing information for as long as the shared problems had not been solved together.

The state-of-the art method for reflexivity is video reflexive ethnography. It involves observing people at work, interviewing and filming them in action. Footage is selected and presented to caregivers who are

asked to discuss and solve the communication problems. (Carroll, Iedema et al. 2008). In our TIPP we developed an alternative to video reflexive ethnography. Rather than footage, we took the risk analysis as the starting point for reflexivity. We did so because physicians strongly believe in evidence as a starting point for improving quality and safety. They prefer to start from evidence-based risk analyses which should underpin any plan for change that consequently should contain evidence-based interventions and fit into their own primary workflow.

Our TIPP generated a community of general practitioners and hospital physicians whose common aim became to improve transitional safety. At several meetings the physicians discussed how they understood a problem, how they interpreted the incident in their local context and how they could develop pragmatic solutions that would fit their workflow and current abilities. This extended their network, a strong benefit as having a network is key to moving competently within primary care centers and hospitals. Moving competently involves: 1) knowing which failures are permissible and which are not, and 2) knowing what the other stakeholders can and cannot do. Here, we see a similarity with the work of Charles Bosk who explained that learning how to make mistakes – that is, knowing which errors you are allowed or not allowed to make – is a key lesson in medical education (Bosk 2003).

One could say: patient safety should not depend upon informal relations; it requires a safe system (Vincent 2010), a reliable system that can perform consistently under specific conditions for a certain time. A safe system would ensure the probability of success that, for example, recommendations will be followed or referral letters will comply with standards. Yet, current health delivery practice is a highly complex system and not all of its processes are as ‘manufacturable’ as one would wish (Braithwaite 2015). Hence, resilience is needed. Rounds of reflexivity support care providers’ resilience, and in the TIPP we learned that reflexivity can and does result in safety management measures. The TIPP boosted the implementation of a new guideline for communication between GPs and hospital specialists. It initiated the start of group discharge consultations and a regional initiative to create an integrated electronic healthcare record. Meanwhile, continuing reflexivity meetings – on, for example, transitional

incidents or more prospectively, subjects relevant to transitional safety such as clinical guidelines or current shared cases – will support clinicians to work around current, persistent system flaws that need long-term solutions.

## **Conclusion**

Reflexivity meetings for clinicians from different health care settings help clinicians to move competently in the health care chain. Discussing evidence-based current performance on transitional safety, such as incident reports, patient-reported outcomes and the perceptions of health care providers fosters the building of a community that is focused on improving transitional safety management. Evidence reflexivity fits in well with medical practices and works in a similar way to other forms of reflexivity.

## **References**

Anthony, D. (2003). "Changing the nature of physician referral relationships in the US: the impact of managed care." *Social Science & Medicine* **56**: 2033–2044.

Berendsen, A. J., Kuiken, A., Benneker, W. H., Meyboom-de Jong, B., Voorn, T. B., & Schuling, J. (2009). "How do general practitioners and specialists value their mutual communication? A survey." *BMC Health Services Research* **9**(9): 9.

Bosk, C. (2003). *Forgive and remember: managing medical failure*. Chicago, University of Chicago Press.

Braithwaite, J. W., R. Hollnagel, E. (2015). "Resilient health care: turning patient safety on its head." *International Journal for Quality in Health Care* **27**(5): 418-420.

Brewster, A., Cherlin, E., Ndumele, C., Collins, D., Burgess, J., Charns, M., Bradley, E., Curry, L. (2016). "What Works in Readmissions Reduction: How Hospitals Improve Performance." *Med Care* **54**(9).

Buurman, B., PhD; Parlevliet, J.; Allore, H.; Blok, W.; van Deelen, B.; Moll van Charante, E.; de Haan, R.; de Rooij, S. (2016). "Comprehensive Geriatric Assessment and Transitional Care in Acutely Hospitalized Patients. The Transitional Care Bridge Randomized Clinical Trial." *JAMA Intern Med* **176**(3): 302-309.

Carroll, K., et al. (2008). "Reshaping ICU Ward Round Practices Using Video-Reflexive Ethnography." *Qualitative Health Research* **18**(3): 380-390.

- Coleman, E., Parry, C., Chalmers, S.; Min, S. (2006). "The Care Transitions Intervention. Results of a Randomized Controlled Trial." Arch Intern Med **166**: 1822-1828.
- Cott, C. (1997). ""We decide, you carry it out": a social network analysis of multidisciplinary long-term care teams." Social Science & Medicine **45**(9): 1411-1421.
- Dixon-Woods, M., Bosk, C., Aveling, E., Goeshell, C., Pronovost, P (2011). "Explaining Michigan: Developing an Ex Post Theory of a Quality Improvement Program." Milbank Quarterly **89**(2): 167-205.
- Gobel, B., Zwart, D., Hesselink, G., Pijnenborg, L., Barach, P., Kalkman, C. (2012). "Stakeholder perspectives on handovers between hospital staff and general practitioners: an evaluation through the microsystems lens." BMJ Quality & Safety **21**.
- Haggerty, J. L., Reid, R.J., Freeman, G.K., Starfield, B.H., Adair, C.E. and McKendry, R., (2003). "Continuity of care: a multidisciplinary review." British Medical Journal **327**(425): 1219-1221.
- Hansen, L., Young, R., Hinami, K., Leung, A., Williams, M. (2011). "Interventions to Reduce 30-Day Rehospitalization: A Systematic Review." Annals of Internal Medicine **155**: 520-528.
- Hollnagel, E., Woods, D. D., Leveson, N. C. (2006). Resilience engineering: Concepts and precepts. Aldershot, UK, Ashgate.
- Iedema, R. (2011). "Creating safety by strengthening clinicians' capacity for reflexivity." BMJ Quality & Safety **20**(Suppl 1): i83-i86.
- Jack, B., Chetty, V., Anthony, D., Greenwald, J., Sanchez, G., Johnson, A., Forsythe, S., O'Donnell, J., Paasche-Orlow, M., Manasseh, C., Martin, S., Culpepper, L. (2009). "A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial." Ann Intern Med. **150**(3): 178-187.
- Jayakody, A., Bryant, J., Carey, M., Hobden, B., Dodd, N. and Sanson-Fisher, R. (2016). "Effectiveness of interventions utilising telephone follow up in reducing hospital readmission within 30 days for individuals with chronic disease: a systematic review." BMC Health Services Research **16**: 403.
- Jones, C., Vu, M., O'Donnell, C., Anderson, M., Patel, S., Wald, H., Coleman, E., DeWalt, D. (2015). "A Failure to Communicate: A Qualitative Exploration of Care Coordination Between Hospitalists and Primary Care Providers Around Patient Hospitalizations." Journal General Internal Medicine **30**(4): 417-424.
- Kansagara, D., Chiovaro, J.C., Kagen, D., Jencks, S., Rhyne, K., O'Neil, M., Kondo, K., Relevo, R., Motu'apuaka, M., Freeman, M. and Englander, H. (2016). "So many options, where do we start? An overview of the care transitions literature." Journal of hospital medicine **11**(3): 221-230.
- Lynch, M. (2000). "Against Reflexivity as an Academic Virtue and Source of Privileged Knowledge." Theory, Culture & Society **17**(3): 26-54.
- Mayne, J. (2010). Contribution analysis: Addressing cause and effect. Evaluating the complex. R. Schwartz, Forss, K., Marra, M. New Brunswick, Transaction Publishers.
- Melle, M. A., et al. (2015). "Improving transitional patient safety: research protocol of the Transitional Incident Prevention Programme." Safety in Health **1**(1): 1-10.

Mesman, J. (2011). *Resources of Strength: an exnovation of hidden competences to preserve patient safety. A Socio-Cultural Perspective on Patient Safety*. E. Rowley, Waring, J. Farnham Ashgate.

Naylor, M. (2000). "A Decade of Transitional Care Research with Vulnerable Elders." J Cardiovasc Nurs **14**(3): 1-14.

Scotten, M., LaVerne Manos, E., Malicoat A., Paolo, A. (2015). "Minding the gap: Interprofessional communication during inpatient and post discharge chasm care." Patient Education and Counseling **98**: 895-900.

Snow, V., Beck, D., Budnitz, T., Miller, D., Potter, J., Wears, R., Weiss, K., Williams, M. (2009). "Transitions of Care Consensus Policy Statement: American College of Physicians, Society of General Internal Medicine, Society of Hospital Medicine, American Geriatrics Society, American College of Emergency Physicians, and Society for Academic Emergency Medicine " Society of Hospital Medicine.

Vincent, C. (2010). Patient safety. West-Sussex, Wiley-Blackwell.

Wijngaarden, J. D. H., van ; de Bont , A.A.; Huijsman, R. (2006). "Learning to cross boundaries: The integration of a health network to deliver seamless care." Health Policy **79**(2-3): 203- 213.

Zwart, D. L. L., M.; van de Vooren, R.C.;Kuyvenhoven, M.M.; Kalkman, C.J.; Verheij, T.J. Wagner, C. (2011). " Patient safety culture measurement in general practice. Clinimetric properties of 'SCOPE'." BMC Fam Pract. **12**(Nov).