Appendix A1. MEDICAL RECORD REVIEW

Six medical specialists (three general practitioners (GPs), two cardiologists, one gastroenterologist, some of whom were retired) reviewed the transitional medical records. The reviewers received a half-day training. This training included: the definition of transitional safety incidents (TSIs), casuistry and practicing with the transitional medical record. One transitional medical record was reviewed jointly. The training was given by two researchers (MM, JP) of the Transitional Incident Prevention Programme (TIPP) study and an expert on medical records reviews (ML). The review process took three weeks, in which the reviewers attended one reflective meeting to discuss uncertainties and improve consensus.

The reviewers were instructed to identify TSIs in the medical record between the first of April 2013 and the first of October 2013. When a patient had visited both the gastroenterologist and cardiologist, the reviewers were instructed to only assess the journey between GP and cardiology. First, reviewers summarized the patient's journey. When a TSI was identified, the reviewer gave a summary of the TSI and classified the TSI according to type, cause, severity and preventability. Multiple TSIs could be identified in a single transitional medical record.

The classification of the type of TSIs was based on a previously composed list of susceptible steps in the transitional care process and risk factors for TSIs (appendix Table 1).

Appendix Table 1. Classifications of type

	Type
1	Referral information from GP to hospital
2	Information from hospital to GP (e.g. not available, delayed, incomplete, incorrect, ignored in hospital)
3	Diagnostic examination (e.g. not performed, twice performed, incorrect test)
4	Medication/prescription (not registered, double or incorrect medication)
5	Most responsible physician
6	Communication/co-operation
7	Triage
8	Diagnosis
9	Self-care advise
10	Accessibility
11	Out-of-hours service
12	Discharge from the outpatient clinic (other than correspondence)
13	Discharge after hospitalization (other than correspondence)
14	Referral to outpatient clinic (other than correspondence)
15	Referral to hospital for emergency department or hospitalization (other than correspondence)
16	Record-keeping in the medical record

GP=general practitioner.

The classification of the cause of TSIs was based on the Eindhoven Classification Model, which differentiates “techniques”, “organization”, “human acts” and “patient related” as causal factors. Both the categorization of type and cause were multiple response questions.

The classification of the severity of TSIs was based on the National Coordinating Council for Medication Error Reporting and Prevention Index (NCC MERP Index), which is frequently used to classify the severity of errors. The items “mental harm” and “delay” were added to the NCC MERP Index to fit the subject of transitional care better. The levels of the NCC MERP were divided into three groups: 1) “unsafe situations”, which corresponds with level A of the NCC MERP Index, 2) “near misses”, which corresponds with level B through D and 3) “adverse events”, which corresponds with level E through I (Appendix Table 2).

Appendix Table 2 Classification of severity

A	"Circumstances or events occurred that had the capacity to cause error"
B	"Error occurred but did not reach the patient"
C	"Error occurred that reached the patient but did not cause patient harm"
D	"Error occurred that reached the patient and required monitoring to preclude harm or confirm that it caused no harm"
E	"Error occurred that may have contributed to or resulted in temporary (mental or physical) harm or prolonged suffering from curable symptoms and required intervention"
F	"Error occurred that may have contributed to or resulted in (mental or physical) harm and required an initial or prolonged hospital stay"
G	"Error occurred that contributed to or resulted in permanent patient harm"
H	"Error occurred that required intervention to sustain patient's life"
I	"Error occurred that may have contributed to or resulted in patient death"

The classification of the preventability of TSIs was divided into a six-point scale, ranging from "(nearly) no evidence of preventability" to "(definitely) evidence of preventability". Beforehand, additional questions were asked to trigger the reviewer's train of thoughts. Furthermore, the reviewers were asked during which transition of the healthcare process the TSI had happened (at referral, at hospitalization, at/after discharge, during/after visit to the outpatient clinic, at a visit to the GP or unclear). If needed, consultation with other medical specialties (cardiologist, gastroenterologist, GP) was available. When a reviewer indicated uncertainty about a (possible) TSI, an expert reviewed the transitional medical record as well. Next, the reviewers evaluated the quality of the medical records of both the GP and the hospital separately and the correspondence between the two, categorized in "good", "adequate", "moderate", "poor" and "not possible to review due to missing data". The case report form is can be found in Appendix 2.

Appendix A2. STANDARDISED ASSESSMENT OF OBJECTIVELY IDENTIFIABLE TSIs

Two researchers assessed three objectively identifiable TSIs as a reference standard. These three TSIs consisted of (1) presence and timeliness of correspondence from hospital to GP; (2)

redundant diagnostic testing performed twice both by the GP and hospital; and (3) communication of prescription changes made in the hospital. First, the researchers assessed the number of visits to the outpatient clinic, number of hospital admissions and number of visits to the GP. Second, they assessed the number of transitions, in which a referral by the GP, discharge by the outpatient clinic or after hospital stay, and important policy changes in hospital that demanded communication with the GP were counted as a transition. Third, they assessed if correspondence was present in the medical record, and if correspondence was timely (within 14 days after the transition). When the correspondence was not present or delayed, we considered this a transitional incident. Fourth, the researchers assessed the performed diagnostic tests. When the test was performed both by the GP and the hospital within three months and met the inclusion criteria, we considered this a TSI. Inclusion criteria were: 1) any laboratory test that is not routine (e.g. hormones, virus serology or other blood levels that are not susceptible to acute change), 2) blood- or urine cultures, 3) radiology (echo, x-rays or spectroscopy), 4) event recording (heart rhythm registration), 5) pathology tests (smear tests, skin biopsy), and 6) spirometry. Exclusion criteria: 1) any diagnostic test that requires repetition (e.g. urine analysis, electrocardiography), 2) blood tests susceptible to acute changes (e.g. troponin, CRP, BSE, leucocytes, blood gas analysis), 3) diagnostic testing usually not performed or requested by the GP (CT-scans, MRIs, colonoscopies, liquor testing), 4) diagnostic tests performed twice because of deterioration of the patient 5) diagnostic tests that are performed twice within one organisation (within the general practice or hospital). Last, a researchers identified prescription changes in the hospital medical record (both in the written consultation text and the medication prescription), and checked the GP medical records for confirmation or clues of the communicated prescription change. When no sign of

communication or prescription change was found in the GP medical record, we considered this a TSI.