Structural Shared Care (Long Term Continuity of Care) for Patients with Chronic Diseases

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Abstract

The long term management of patients with chronic disease is the main problems of care. Structural shared care is one of the health care schemes whose purposes are the continuity of care for chronic disease by systematic approach that is integration of services with primary and secondary care.

Key word : Patients, Chronic Diseases, Structural Shared Care

In these current circumstances, there are limited funds and resources combined with clinicians facing more attending patients in the long term management of chronic diseases. There are many care taking patient problems and obstacles for both GPs and specialists especially the provision of continuity of care for patients with chronic diseases such as more drop out rate[1], inadequate provision of care, long waiting times[1,2], overcrowding of patients, inadequate time for patients, duplication of medical work[1] and inappropriate use of resources. Other health service methods need to be ascertained in order to overcome these problems.

Problems

The long term management of chronic disease is the main problem of care. The problems which are faced are mentioned as follows :

- The continuity of care for patients with chronic disease[1].
- The coverage and balance of care in chronic disease[1].
- The default from treatment, high rate of drop out from follow-up[1,3,4,5].
- Overcrowding and unplanned patients at the specialist level[1,6].
- The traditional out-patient services cannot provide quality care, or receive continuity of specialist's advice that contribute to high admission rates, delay in treatment, performing of unnecessary procedures, inappropriate follow-up and high costs[2,7].
- Secondary care is still provided in hospitals and associated roles and responsibilities are separate from those of primary care and lack effec-

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tive communication leading to duplication of medical work by GPs and specialists[1,2,4].

- The inappropriate use of services leads to long waiting lists and excessive demand[2,6].
- No clear standards for either the referral of patients by GPs or the discharge of patients back to the GPs such as referral letters which lack important information and often fail to address the central concerns of the doctor managing patients or inappropriate referrals[2,5].

Aims

It might be necessary to adapt the current system or re- engineering this system in order to pragmatically improve health care service. The purposes are :

- To provide effective health services because rising costs of health care is growing up in all point of primary care[2].
- To provide a greater proportion of care outside hospitals by GPs and associated community health services, reducing unnecessary or inappropriate referrals, reducing demand for secondary care, limiting return visits to hospital through protocols and guidelines and allowing patients to receive specialist advice or with continuing specialist involvement[1,2,4,7-9].
- To earlier and safer discharge from hospital and more frail elderly people supported in their own homes[2].
- To have better coordinated and more flexible community care, efficient use of acute hospital services and greater responsiveness to the needs of patients[1,2,9].
- To improve communication, foster collaboration, and clarify responsibilities between primary and secondary care by integration of GPs, specialists, and community health services at regional level[2,7,9].
- To ensure a high standard of care and continuity of care will be provided to patients[4,7].
- To have effective balance between community and hospital base care[9].
- To have regularity, effectiveness and efficiency of long term out-patient care[1].
- To maximize the use of available resources within the referral chain[1,9].
- To provide a feasible and acceptable health care service system for patients and GPs[4,8,9].

There is a scheme that might reach the aims, that is the structural shared care scheme.

Definition :- Structured shared care is the joint participation of GPs and hospital consultants in the planned delivery of care for patients with chronic conditions, informed by an enhanced information exchange over and above routine discharge referral and letters[6,8,9] or integration of primary and secondary services[8].

Structural shared care is the one of the health care schemes whose purposes are the continuity of care for chronic diseases by systematic approach that is the coordination, collaboration, communication and organization among patients, primary health care teams and specialists[1].

Shared health care can be classified by methods of information exchange, and technology into 6 groups[6,8].

1. Community clinics

A specialist from the hospital attends or runs a clinic for shared care patients in general practice. This cannot be strictly described as a process of data transfer. The chief way of communicating in these shared care schemes will be informal during the specialist's visit in general practice. The identification of patients not responding to the system depends upon the efficiency of general practice staff. The specialist may use this opportunity to train the general practitioners and practical nurse to become more independent of his advice. Shared care patients may also be seen in the hospital clinic.

2. Basic model (shared care communication by letter or standardized record sheet)

Regular letters and standardized record sheets are sent by hospital doctors and general practitioners after each attendance by the shared care patients, which in being regular and mutual goes beyond the normal level of communication between the hospital and general practice. Conceivably, a shared care coordinator could be alerted to any non-responders in the system if a letter or standardized record sheet did not arrive at an expected time. The containment of details of treatment and medical history in a single place would be possible if summary sheets were produced after each exchange of information.

3. Liaison

Hospital based teams meet to discuss the management and overall health of individual shared care patients with the general practitioners on a regular basis or until the parties have agreed on a joint management care plan. Failings in the system are likely to be noticed quickly because the participants are in regular contact. Shared care patients can be seen in the hospital clinic and further information exchange is made by letter and standardized data sheets. Management guidelines for general practice would be designed jointly by the GPs and hospital teams. The frequency of visits to hospital and general practice is left to the patients themselves.

4. Shared record card

An agreed data set is entered onto a shared care card or booklet, otherwise known as a cooperation or liaison card. The shared care card is usually carried by the patient, thus transferring information between the participating personnel. A means of quickly finding non-responders in the shared care system is unlikely, as this feature does not interact to the structure. Problems may be identified at a later date if there is a coordinator or audit circle in place, monitoring the process of patients under shared care at regular intervals.

5. Computer assisted shared care

A circle of information exchange is established from general practice to the hospital and back to general practice, after each patient visit. An agreed data set is collected by the participants and entered into a hospital computer with the results of any biochemical or serological tests ordered by GPs or by the hospital. A hospital consultant examines the results of each visit and updates the computerized patient records. These are sent back to the GPs along with standardized letters which may contain advice and information for the GPs with regard to alterations in therapy. If the circle of information is broken, then the coordinating personnel are alerted and action can be immediately taken to ascertain the reasons for the failure and correct it.

6. Electronic mail

This requires a common database with multi-entry and multi-access ports available to each participating GP/nurse and hospital doctor/nurse. An agreed data set is collected during each patient attendance. This is entered into the computer and stored in a single place or sent electronically to the database of the partner in shared care where it is available to each participant along with details of the previous shared care attendance in general practice or hospital. The shared computer system could be responsible for organizing visits to hospital or general practice.

Process

The implementation of this plan requires a change in the role of the specialist and the creation of community subspecialists with different skills and roles[2]. It needs to set the registration, recording and recall system in order to accurately infer the medical data and retrieve in future or recognize who are the risk groups and call them to visit the clinician at the predetermined time. It needs to set the whole system and assign each participants' responsibilities and the precise way to communicate and coordinate with each other. GPs, practice teams, and community health staff need to take part in routine management and monitoring activities on out-patient care[2]. The ultimate responsibility for the patient should remain with the GPs[2].

Shared care scheme needs

1. Central registration[1,6]
2. Call and recall system[1,6,9]
3. Defined and agreed responsibilities[1,3,6,9]
4. Shared records[1,3,6,7]
5. Coordination of care and communication channel[1,3,6,7]
6. Guidelines of management and referral policies[1,6,7,9]
7. Patient-held records[1,6,7,9]
8. Education and training[2,6]

1. Central registration[6,10,11]

This system is for registration, recording, update and audit of patients, and medical information. It is a reliable, comprehensive and fail-safe method of recording identification, essential social, demographic, clinical and therapeutic information from routine clinical contacts and can link with other routinely available patient health information stores[10]. It will improve communication between patients, primary care physicians and specialist clinics. It is the method for automatic monitoring of

the control of individuals, evaluation of the medical care for specified groups of patients and studies on the natural history of disease and therapeutic intervention including purpose designed statistical packages for the actuarial prediction of risk in defined subgroups of patients[10].

A. registration and review[10]

Registration takes place for out-patients using an agreed pre-printed clinical data base which leads to the creation of a personnel cumulative record for each patient.

The new registration procedures and methods of working in the clinic have been fully integrated.

Full review examinations are completed at stipulated intervals such as each year, when the basic record is updated and corrected.

B. record and communication between patients and doctors[10]

The system prints versions of the record for patients, GPs, and specialists.

The format and content of this record can be varied to suit different information needs.

2. Call and recall system[1,5,6,11-13]

Aims

1. To remind patients who are due for follow-up.
2. To provide the continuity of treatment and care.
3. To follow the risk patients.
4. To detect pre-symptomatic sub-clinical or even overt but undetected diseases[12].

This system, central hospital based computer generated minimum amount of information about patient identification data, clinical profile and impression of patients, details of current medications, laboratory test results, caregiver's name and the next appointment date and send letters enclosing these data to the GPs, specialists and patients at the date follow-up activated (the assigned date before the actual appointment date). The clerical person who is responsible for this task will list the name, address of the patients, and the name of the providers and send the letters, medical records and follow-up forms to them when it is nearly the appointment date (the routine follow-up interval can be set at any time which is considered best suited to the needs of the patient, patient making a new follow-up appointment)[1] or sometimes needs to follow-up at predetermined intervals if there are some problems such as abnormalities of laboratory investigations in order to recheck, further investigate or provide some other management[9,12].

3. Defined and agreed responsibilities[1,2,3,6]

This task is an important one of structural shared care. Each participant needs to be assigned a role and their responsibilities in order to integrate the process and avoid the duplication of medical work especially who sees the patient and what examinations or tests are done, and when they will refer or refer back and the task can run smoothly and contribute to high effectiveness of care. For example, the specialist's role is to oversee and coordinate the scheme, undertake clinical review and supervision of patients and the GP's role, which is classified as investigation and treatment of patients and taken to indicate that GPs enjoy full clinical responsibility for the shared care patients and can change the initiate treatment.

4. Shared records[1,3]

It needs to determine what will be recorded by general practitioners and specialists that is the shared record between GPs and specialists.

5. Coordination of care and communication channel[1,3,6,7]

Aim

To coordinate and communicate among providers and integrate the process into a meaningful whole[1].

To coordinate approach between GPs, specialists and other providers with the purpose of delivering an agreed standard of care[1].

To communicate between patients and providers to understand their disease and monitoring themselves about disease or adverse effects of medication.

To improve patient's care.

To improve interpersonal relationships.

To improve team working.

To improve knowledge.

Channel

1. liaison
2. letter
3. telephone
4. meeting
5. individual direct-contact at out-patient clinic
6. home visit

6. Guidelines of management and referral policies[1,2,6,7,9,14-16]

It needs to provide guidelines for each level of provider in order to carry out the patient management accurately and contribute to improve health care outcomes and health service efficiency and reduce levels of inappropriate practice[17]. GPs and specialists have to prepare protocols and clinical guidelines.

7. Patient-held records[1,7,9,18]

It might be necessary for patients and providers for communication and information exchange. To day, patients have legal right to receive their medical documents and doctors are obliged to give enough to ensure adequate health care and to provide a basis for informed consent to treatment. There are many problems with current methods for recording clinical information, in terms of completeness, comprehensiveness, reliability and continuity. Shared care cards with computer generated medical summary detail, medical knowledge and instructions and records.

What is the patient held record ?

It is a record that consists of a full case record or a summary record including structured problem lists such as diagnosis, other health problems, details of treatment, advice and information relevant to particular patient groups. The patient carries this record and he or she has automatic full access to its content.

Aims

To improve the communication between doctors and patients.

To transfer the records in a suitable form.

Because chronic disease is a lifelong condition, its management may be shared between GPs, specialists, nursing and other staff over the lifetime of the patient. This requires accurate information transfer between the parties concerned. To be effective, medical records must be complete and available at the time of consultation.

8. Education and training[2,6]

This is the most important task to perform inevitably in order to understand the meaningful whole of the health care service for every participant because it might fail and be useless. GPs, specialists and primary care teams need training.

Advantages

There are many advantages in this scheme as follows :

- GPs and specialists learn to improve the effective use of secondary care and to transfer some of the responsibility from hospital to primary care[2].
- Improve care in terms of standardization, continuity ,coverage, efficient use of primary and secondary skills and possibly reduced costs[2].
- Improve team working and communication between GPs and specialists[2].
- For specialists, reduced waiting lists, attraction of referrals, improve working environment, variation in work pattern, and identification of management problems at an early stage[2].
- For GPs, improve team-work and communication, increase access to services, reduced waiting time, more responsibility for care, expansion of team roles in diagnosis and treatment and access to informal advice from specialists[2].
- Enhances consultants' confidence in GPs' competence and increase GP 's knowledge[2].
- Enhance GP's confidence to provide continuity of care for patients[2].
- Enable difficult patients to be managed without being admitted to hospital[2].
- Enable more patients to receive specialist advice, increasing the knowledge of the patients' conditions[2].
- Identify patients who fail to attend[2].
- Patients receive a standardized clinical review[1].
- Patients receive effectiveness and efficiency of long term follow care[1].
- Reduce unplanned and re-referral[1].
- Shared records are an important facilitator of specialist involvement[1].
- Patient-held records can enhance motivation, improve communication and assist patient involvement and lead to better follow-up rates[1].
- Transfer of workload from specialists to primary care[1].

Disadvantages

There are some disadvantages such as

- Reduction in secondary care funding due to reduced hospital out-patient services and referrals, increased administration[2].
- The maintainance of responsibility for the patient and the use of existing resources and administration for GPs and primary care team[2].

- May not be suitable for all specialties(2).
- Workload on GPs will squeeze resources and worsen occupational stress(2).
- The hospital will become an acute service provider for a large population supported by district community hospitals(2).
- Community specialists will become a sub-consultant grade with consequent recruitment difficulties in the profession(2).

Obstacles

There are some obstacles as follows :

- Operationalization, several participants with their own view point and local factors(1).
- Financial and operational barriers(1).
- Lack of confidence and time(6).
- Inadequate premise and lack of space(6).
- Negative attitude in patient resistance to change low confidence in the non specialist and wishing to see the doctor rather than nurse(6).

Efficiency of shared care(1)

As mentioned above, there are some advantages, disadvantages and obstacles that need to be considered in the efficiency of this scheme compared with the current scheme, which one is better? The following questions need to be considered.

1. Benefit : How much benefit can be achieved by shared care? The principal benefits claimed for shared care are :

1.1 Reduce loss to follow-up.
1.2 More complete monitoring.
1.2.1 Clinical finding.
1.2.2 Assessment.
1.2.3 Recording of results.
1.3 Reduced specialist workload.
1.4 More appropriate balance of care between GPs and specialists.
1.5 Recall system which prompts patients and doctors to review and remind defaulters.

2. Costs: The identified costs to the services are :

2.1 Increased GP workload.
2.2 Increase the shared care infrastructure that are
2.2.1 Coordinators nurse, clerical, medical.
2.2.2 Recall system.
2.2.3 Purpose-designed records.
2.2.4 Particular arrangement.
2.2.5 Type of staff employed.
2.2.6 Availability of computer facilities.
2.2.7 Registry, centralization.
2.3 Patient costs include
2.3.1 Traveling fares, time costs, productivity costs.
2.3.2 Consultation fees, medication charges.

SUMMARY

There are many problems and obstacles of continuity of care for chronic diseases encompassing providing standard management for these patients. The limited funds and resources are another problem that needs to be contemplated especially in developing countries such as Thailand. In order to provide the qualitative, standardized, continuous, effective care for patients with chronic diseases and to maximize the use of available resources, the structural shared care is one of the schemes that might reach these aims. It is composed of central registration, call and recall system, defined and agreed responsibilities, shared records, coordination of care and communication channel, guidelines of management and referral policies, patient-held records, education and training.

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REFERENCES

1. McGhee SM, Hedley AJ. The Economics of Shared Care Packages. Pharmaco Economics 1996; 10:197-204.
2. Orton P. Shared care. The Lancet 1994;344:1413-5.
3. McGhee SM, Hedley AJ. Shared care in diabetes. BMJ 1995;310:1199-200.
4. McGhee SM, Mcinnes GT, Hedley AJ, Murray TS, Reid JL. Coordinating and standardizating long term care: evaluation of the west of Scotland shared-care scheme for hypertension. British Journal of General Practice1994;44:441-5.
5. Day JL, Humphreys H, Alban-davies H. Problems of comprehensive shared diabetes care. British Medical Journal 1987;294:1590-2.
6. Greenhalgh PM. Shared Care for Diabetes :A Systematic Review. British Journal of General Practice 1994;44:1-35.
7. Dunning P, Moscattini G, Ward G. Diabetes shared care: a model. Australian Family Physician 1993; 22:1601-8
8. Hickman M, Drummond N, Grimshaw J. A taxonomy of Shared care for chronic disease. Journal of Public Health Medicine 1994;16:447-54.
9. Hickman M, Drummond N, Grimshaw J. The Operation of Shared Care for Chronic Disease. Health Bulletin 1994;52:118-26.
10. Jones RB, Hedley AJ, Peacock I, Allison SP, Tattersall RB. A Computer-Assisted Register and Information System for Diabetes. Method of Information in Medicine 1983;22:4-14.
11. Hedley AJ, Hall J, Kemp M, et al. A community Base National Follow-up Register for Patients Treated for Thyroid Disease. Medinfo 1974;63: 463-6.
12. Hedley AJ, Scott AM, Debenham G. A Computer Assisted Follow-Up Register. Method of Information in Medicine 1969;8:67-77.
13. Jones SJ, Hedley AJ, Curtis B, Allison SP. Do We Need Thyroid Follow-Up Registers ? A cost-effective Study. The Lancet 1982;29:1229-32.
14. Grimshaw JM, Russell IT. Achieving health gain through clinical guidelines II: Ensuring guidelines change medical practice. Quality in Health Care 1994;3:45-52.
15. Thomson R, Lavender M, Madhok R. How to ensure that guidelines are effective. BMJ 1995; 311:237-42.
16. Watkins PJ. Guidelines for good practice in the diagnosis and treatment of non-insulin-dependent diabetes mellitus. Journal of the Royal College of Physicians of London 1993;27:259-66.
17. Konroy M, Shannon W. Clinical guidelines: their implementation in general practice. British Journal of General Practice 1995;45:371-5.
18. McGhee SM, Hedley AJ, Jones RB, Cheng KK. Patient Held Records: Their Current Status & Implications for Health Care in Hong Kong. Hong Kong Practitioner 1991;33:1374-81.

การแบ่งการดูแลผู้ป่วยอย่างเป็นระบบและมีโครงสร้างที่ชัดเจนสำหรับผู้ป่วยโรคเรื้อรัง

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การดูแลผู้ป่วยโรคเรื้อรังในระยะเวลายาว เป็นปัญหาที่สำคัญของการให้การบริการการดูแลผู้ป่วย การแบ่งการดูแลรักษาผู้ป่วยอย่างเป็นระบบและมีโครงสร้างที่ชัดเจนสำหรับผู้ป่วยโรคเรื้อรัง เป็นระบบการดูแลสุขภาพระบบหนึ่งที่มีวัตถุประสงค์ที่สำคัญ คือ การให้การบริการการดูแลรักษาผู้ป่วยโรคเรื้อรัง ให้ได้รับการบริการอย่างต่อเนื่องจากผู้ให้บริการโดยใช้วิธีที่มีระเบียบแบบแผน และผสมผสานการให้การบริการผู้ป่วยทั้งปฐมภูมิและทุติยภูมิเข้าด้วยกัน

คำสำคัญ : โรคเรื้อรัง, ผู้ป่วย, การแบ่งการดูแลอย่างเป็นระบบและมีโครงสร้างที่ชัดเจน

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