

**Appendix 1.** Additional information on the included studies.

<b>Source (location)</b>	<b>Objective</b>	<b>Intervention</b>	<b>Case manager profession</b>	<b>Follow-up</b>
Crane et al., 2012 <sup>[28]</sup> (USA)	To report the first-year results of a coordinated, team-based approach that integrates medical and behavioral health care and case management (CM).	<ul style="list-style-type: none"> <li>▪ A care plan was developed by a multidisciplinary team.</li> <li>▪ The following interventions were proposed: Drop-in group medical appointment; Short, individual sessions after the group medical visit; Telephone access to a registered nurse care manager; Small group “life skills and support” sessions with care manager.</li> <li>▪ If needed, any care other than emotional or group support that was provided in the program could be reported to or coordinated with primary care provider (PCP) with the patients’ consent. All care, including telephone calls, was documented in the patient electronic medical record, which could be accessed by physicians in the ED as needed.</li> </ul>	Registered nurse	12 months
Lee et al., 2006 <sup>[10]</sup> (USA)	To examine the impact of nurse CM interventions on the number of emergency department (ED) visits by frequent users.	<ul style="list-style-type: none"> <li>▪ The following interventions were proposed: Referral to PCPs, including making appointments and following up on subsequent ED visits; Referrals to social workers and community agencies, including substance abuse counseling and referral, crisis intervention and referrals, and assistance with food and housing resources; Assistance with insurance applications; Limiting narcotics; Collaboration with PCPs and case managers for insurance companies.</li> </ul>	Not identified	5 months
Peddie et al., 2011 <sup>[29]</sup> (New Zealand)	To determine if a management plan made a difference on patient attendance for those who received CM compared to a cohort who did not.	<ul style="list-style-type: none"> <li>▪ A management plan was developed by a multidisciplinary team and the patient that could include: medical history, social background and advice for providers involved in the patient’s care.</li> <li>▪ Management plan entered into a dedicated database accessible to ED staff. The ED receptionist was informed when the patient arrived in the ED.</li> <li>▪ A free of charge visit with general practitioner (GP) to allow the patient to discuss the plan with him and a number of free GP visits was provided for the most</li> </ul>	Registered nurse	4 years

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Philips et al., 2006 <sup>[30]</sup> (Australia)	To evaluate the effects of multidisciplinary CM on ED utilization and psychosocial variables for frequent ED users.	<p>frequent users.</p> <ul style="list-style-type: none"> <li>▪ Complex CM meetings were conducted with a multidisciplinary team for the most complex patients. Occasionally, the patient could also be present.</li> <li>▪ A multidisciplinary team proposed the following interventions: Hospital-based care; Community health care; Primary health care; Short and long term CM.</li> <li>▪ The interventions were available 9:00AM to 9:00PM every day.</li> </ul>	Not identified	12 months
Pillow et al., 2013 <sup>[13]</sup> (USA)	To measure the impact of a novel, Web-based, ED-initiated, multidisciplinary program using care plans on chronic ED frequent users.	<ul style="list-style-type: none"> <li>▪ A care plan was developed by a multidisciplinary team and was review and update bimonthly.</li> <li>▪ The following interventions were proposed: Social work assessment; Instruction to call pain team for the development of a pain contract; Radiology studies; Outpatient referral for specialty clinics; Urinary toxicology studies; Managed care referral; Psychiatric assessment.</li> <li>▪ Lead coordinator ensured that referrals and assessments were completed.</li> <li>▪ Care plan was included in the ED tracking system to identify frequent user, facilitate access to the care plan, indicate that the care plan needs to be reviewed and allowed ED staff to add notes or suggestions based on encounters with patients.</li> </ul>	Not identified	17 months
Rinke et al., 2012 <sup>[22]</sup> (USA)	To determine if a prehospital CM intervention reduces transport and non-transport emergency medical system (EMS) responses for frequent EMS users.	<ul style="list-style-type: none"> <li>▪ A care plan was developed by a multidisciplinary team based on the case manager initial home-based assessment of patients' medical, psychosocial, and insurance needs.</li> <li>▪ The following interventions were proposed: Arranged care with primary and subspecialty medical providers; Referred patients to relevant psychosocial services; Confirmed patient attendance to all referrals; Telephone access to Baltimore HealthCare; Patient education on the proper use of EMS.</li> </ul>	Not identified	5 to 12 weeks

Source (location)	Objective	Intervention	Case manager profession	Follow-up
Segal et al., 2004 <sup>[23]</sup> (Australia)	To evaluate a program of care coordination for individuals with a history of high use of in-patient services in regard to health outcomes, patient outcomes and cost outcomes.	<ul style="list-style-type: none"> <li>▪ Multidisciplinary team met each week to review the care plans and share ideas about challenging patients.</li> <li>▪ A care plan was developed by care coordinator (GP) and patient based on a holistic assessment of patient and family needs that covered a whole range of medical, allied health and welfare support services.</li> <li>▪ Frequency of care of plan review was determined by patients' likely future risk of hospital admission: Low-risk: reviewed every 12 months with the care coordinator; Medium risk: reviewed every 6 months and a service coordinator provided telephone support to monitor implementation of the care plan and address emergent problems; High-risk: reviewed every 3 months and case manager provides traditional intensive case management services including an advocacy role.</li> <li>▪ A local health and community services directory was created as a resource for care coordinators and others to aid in finding services for their clients.</li> </ul>	Not identified	2 years
Shah et al., 2011 <sup>[31]</sup> (USA)	To determine whether providing support for navigation of systems and improved access to social and medical resources reduces ED visits and hospitalizations.	<ul style="list-style-type: none"> <li>▪ A care manager met with patients at least monthly, upon appointment, at patient homes or resource centers, to assist patients in obtaining and coordinating needed services.</li> <li>▪ Intervention components: Goal creation and assistance in reaching goals; Assistance with care navigation; Arranging for support services; Care transitions and communication with providers.</li> <li>▪ Patients graduated from the program when the care manager felt they understood how to make appointments, receive medications, and follow-up on goals.</li> </ul>	Social worker or medical office assistant	2.5 years
Sledge et al., 2006 <sup>[24]</sup> (USA)	To determine if a clinic-based ambulatory CM intervention would reduce hospital	<ul style="list-style-type: none"> <li>▪ A multidisciplinary team conducted a recommendation report based on a medical chart review and information from family members, primary and subspecialty care providers, and key social supports.</li> </ul>	Psychiatric nurse	12 months

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	utilization and total cost and / or improve health outcomes.	<ul style="list-style-type: none"> <li>▪ Recommendations included measures that would optimize chronic illness management and patient coping skills to potentially avert preventable re-hospitalizations.</li> <li>▪ Report was presented to PCPs for discussion as well as copied to all of the patients' subspecialty providers and included in the medical record.</li> <li>▪ Case manager offered a follow-up to the patient in primary care to improve coordination of care, self-care patterns, and coping skills, using best practices for common chronic illnesses with techniques to promote early recognition and treatment of any chronic illness exacerbation.</li> <li>▪ The following interventions were proposed: a monthly telephone call to assess needs, offer of assistance with referrals and appointments, and telephone/pager availability to patients 5 days per week.</li> <li>▪ The case manager worked closely with the PCPs and was available for assistance with newly identified needs or ongoing care.</li> <li>▪ The care manager also aimed to track and facilitate completion of recommendations made during the comprehensive assessment.</li> </ul>		
Tadros et al., 2012 <sup>[25]</sup> (USA)	To evaluate the effectiveness of a program in reducing the use of EMS and hospital (ED and in-patient) resources.	<ul style="list-style-type: none"> <li>▪ Coordinator contacted patients to assist them with the coordination of their health and social services' needs.</li> <li>▪ The following interventions were proposed: Investigated factors underlying the excessive use of acute care resources for primary care conditions; Interfaced with GP, homeless services agencies, street outreach teams, hospital social workers, case managers, and adult protective services personnel; Conducted house calls accompanied by the personnel of an organization working with homeless; Patient education regarding appropriate use of EMS; Connected patients with resources including equipment, transportation, housing, social services, mental</li> </ul>	Paramedic	31 months

Source (location)	Objective	Intervention	Case manager profession	Follow-up
Wetta-Hall, 2007 <sup>[32]</sup> (USA)	To assess the impact of a collaborative nursing / social worker CM intervention on ED use, health status, and health locus of control.	<p>health services, and primary care.</p> <ul style="list-style-type: none"> <li>▪ Follow-up care consisted of telephone calls and in-person reminders for repeat access of EMS for non-urgent needs.</li> <li>▪ A multidisciplinary team helped uninsured patients access community resources, navigate the health care system, and find permanent GP or clinics for medical care.</li> <li>▪ The team evaluated patients' needs for nursing and social services, identified goal setting with the patient, initiated coordination of referrals, and provided patient education.</li> <li>▪ The following interventions were proposed: Assessment of patient needs, goal setting, patient education and coordination of referrals; Planning and implementation of health and social services interventions (careful matching of clients with agencies, initial agency contacts, client orientation to services and form completion, and visiting agencies and providers on behalf of the client) and supporting patient connections to informal support networks;</li> </ul>	Registered nurse and social worker	6 months