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Discharge information and support for veterans Receiving Outpatient Care in the Emergency Department: Study design and methods

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ABSTRACT

Background: An explicit goal of Patient Aligned Care Teams (PACTs) within the Veterans Health Administration is to promote continuity of care in primary care clinics and thereby reduce Emergency Department (ED) utilization; however, there has been little research to guide PACTs on how to accomplish this.
Objectives: The overall goal of this study is to examine the impact of a primary care-based nurse telephone support program [DISPO ED] on Veterans treated and released from the ED who are at high risk for repeat visits.
Methods: This study is a two group randomized, controlled trial to evaluate DISPO ED for Veterans treated and released from the ED who are at high risk for repeat visits. We define high risk as those who have had an ED visit or hospitalization during the 6 month period before the index ED visit and have ≥2 chronic conditions. Veterans are randomized to nurse telephone support or usual care. The primary outcome is repeat ED use within 30 days; secondary outcomes are patient satisfaction with care and total costs.
Discussion: The results of this randomized, controlled trial with an Effectiveness–Implementation Type I Hybrid design will be directly relevant to the care of more than 500,000 high risk patients seen in Veterans' Affairs Medical Center (VAMC) EDs annually. Results will also be informative to health systems outside VA aiming to reduce ED use through accountable care organizations.
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1. Introduction

More than 1 million Veterans receive care in Emergency Departments (EDs) in Veterans Affairs Medical Centers (VAMCs) annually [1]. ED visits that do not result in hospital admission, commonly referred to as treat and release visits [2], account for 80% of all VAMC ED encounters [3]. Nearly 1 in 5 Veterans treated and released from a VAMC ED has an unscheduled repeat ED visit and/or hospitalization within 30 days [3]. The risk of repeat ED visits is particularly high among patients with chronic medical conditions who have

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received ambulatory medical services in the ED previously [3–5].

Failing to address patients' unmet needs and difficulty in accessing VAMC services are two primary forces driving repeat ED use [6,7]. Unmet needs after an ED visit range from incomplete understanding of new medications and/or follow-up instructions to poorly controlled chronic diseases [7–9]. Many of these issues may be addressed by high-quality care following discharge. However, perceived barriers to accessing timely primary care and other services may lead Veterans back to the ED for ambulatory care. In a nationally representative sample of more than 15,000 Veterans with repeat ED visits, 72% did not see another VAMC outpatient provider between being treated and released and then returning to the ED [3].

Improving access to services and care coordination are among the primary goals of the Veterans' Health Administration's (VHA) ongoing reorganization of primary care [10]. An explicit goal of newly-developed Patient Aligned Care Teams (PACTs) is to promote continuity of care in primary care clinics and thereby reduce ED utilization; however, there has been little research to guide PACTs on how to accomplish this. In the PACT model, a key role for nurses is telephone management of high risk populations; however, no studies have examined the impact of using nurses to support Veterans after an ED visit.

Discharge Information and Support for Patients Receiving Outpatient Care in the Emergency Department (DISPO ED) is a primary care-based nurse telephone support program for Veterans treated and released from the ED who are at high risk for repeat visits. Based on a strong conceptual framework, evidence review, preliminary studies, and input from clinical and operations partners, DISPO ED is a pragmatic intervention designed to improve care for these high risk Veterans. The goal of this manuscript is to describe the protocol of a randomized, controlled trial examining the effectiveness of DISPO ED. This intervention, delivered by a primary care-based nurse, provides structured telephone support focused on three key areas: (1) improving the ED to primary care transition; (2) enhancing chronic disease management; and (3) educating Veterans and family members about PACT and other VHA and community services.

2. Materials and methods

2.1. The study will test the following hypotheses

2.1.1. Primary

H1. Veterans who participate in DISPO ED, a primary care-based nurse telephone support program after an ED visit, will have a lower rate of ED use in the subsequent 30 days compared to usual care.

2.1.2. Secondary

H2. Veterans who participate in DISPO ED after an ED visit will have higher satisfaction with VA health care compared to usual care.

H3. Veterans who participate in DISPO ED will have lower total VA costs in the 180 day period following an ED visit compared to usual care.

2.2. Overview of study design

This study is a two group, randomized, controlled trial to evaluate DISPO ED for Veterans treated and released from the ED who are at high risk for repeat visits. We define high risk as those who have had an ED visit or hospitalization during the 6 month period before the index ED visit and have 2 or more chronic conditions. After informed consent is obtained and baseline assessment completed, Veterans are randomized to nurse telephone support or usual care. We chose a usual care control group (rather than an active control) because our pragmatic/effectiveness trial is designed to evaluate whether DISPO ED results in meaningful change beyond current practice [11]. Currently, there are no existing policies or procedures for contacting patients after an ED visit, so “usual care” consists of recommendations for follow-up care at the discretion of the individual ED provider.

An additional design feature of the study is the option to involve an identified patient “companion.” Veterans randomized to the intervention arm have the opportunity to request that the telephone support calls also be delivered to an approved “companion,” often a family member; the Veteran must provide a phone number where the companion may be reached. Involving companions is an important feature in making the program patient-centered because many Veterans in our pilot studies expressed that they prefer to receive health information through a spouse or adult child.

Outcome data on patients in both arms are collected at 30 and 180 days. Our primary outcome is dichotomous: any ED visit within 30 days or not. Our secondary outcomes are patient satisfaction with VHA health care at 30 and 180 days and total VHA costs within 180 days of the index ED visit. The study was approved by the Institutional Review Board at the Durham VA Medical Center (01701) and registered at clinicaltrials.gov (NC-T01717976). Study flow is illustrated in Fig. 1.

2.3. Participant eligibility criteria

2.3.1. To be included in the study, patients must meet all of the following criteria

1. Treated and released from the Durham VAMC ED;
2. At least one VAMC ED visit or hospital admission within the 6 month period preceding the index ED visit;
3. Diagnosed with >2 chronic health conditions;
4. Received primary care from a Durham VAMC affiliated primary care clinic (at least one visit in a Durham VAMC affiliated primary care clinic within the previous 12 months); and
5. Valid telephone number in the medical record.

2.3.2. Rationale for targeting VA users with multiple chronic conditions

Consistent with our conceptual framework, our goal is to enroll Veterans for whom the need for additional ED care may be avoided by providing proactive, supportive and coordinated care and services. Among patients with potentially avoidable ED visits (i.e. treat and release visits), we further target patients with ED or hospital use in the previous 6 months, and with 2 or more chronic conditions. The strong association between previous ED or hospital use and risk of return visits has been