

SUPPLEMENTARY MATERIALS

Supplementary Table 1. Dietary targets adopted in the ENTICE-CKD intervention workbook, telephone calls and text messages¹.

Food group	Dietary target (serves/day)	Considerations
Grains/cereals	3-6 (>50% whole grain)	Replacing refined carbohydrates for wholegrains
Vegetables and fruit	5-7	Low potassium alternatives as appropriate
Low fat dairy	2	250mL milk, 40g cheese, 200g yoghurt
Lean meat, poultry and fish	<2 (130-200g)	Modified for protein (aiming for 1.0 g/kg/day)
Fats and oils	20 to 40g	Emphasise healthy oils
Dietary sodium	<100mmol/day (6g salt)	Replace takeaway and processed foods for fresh
Added sugars	<10% total calorie intake	food and healthy cooking methods
Discretionary choices	<2	Limit where possible

Abbreviations – g: grams, kg: kilogram, mL: millilitre.

Supplementary Table 2. Description of the intervention according to the TIDieR checklist.²

Item Name/Number	Item Description
Item 1: Brief name	ENTICE-CKD
Item 2: Why	Telehealth intervention may support patients with stage 3-4 CKD to improve their diet quality through access to education, coaching and regular contact with a health professional. Improving access to dietary education may assist people with stage 3-4 CKD reduce their dietary sodium intake <100mmol/day and improve their overall diet quality in line with the Australian Dietary Guidelines. ¹ These dietary changes are complex and different levels of telehealth tailoring and intensity may be needed to support and sustain dietary behavior change.
Item 3: What	<p>ENTICE-CKD program workbook</p> <p>About ENTICE Introduction page “The focus of the ENTICE program is to help you make gradual changes to your eating and physical activity habits that work for YOU – changes that become lifelong.”</p> <p>Section 1: Setting your goals and keeping track “Use the following steps every time you set a SMART goal...”</p> <p>Section 2: Eating well for healthy kidneys “The ENTICE program will help you to gradually make changes to your diet to meet the daily recommended serves of fruit, vegetables and wholegrain breads/cereals.”</p> <p>Section 3: Active living “Participating in regular physical activity and reducing sitting time is very important for your health and well-being.”</p> <p>Section 4: Why is healthy eating important for my kidneys? Did you know? “Less than 4% of the Australians meet the recommended daily intake for vegetables. Research has shown that increasing your intake of vegetables by as little as ONE serve per day can help you live longer and stronger.”</p> <p>Section 5: Plan for success “There are a number of things that affect what we eat and our overall energy intake. It is important to be aware of, pay attention to and plan for: How you eat; Where/why you eat?”</p> <p>Section 6: Self-monitoring and setting goals Smart snacking Reflections Tracking my food intake</p> <p>Section 7: Additional healthy eating resources Useful websites; Healthy recipes Useful apps for mobiles or tablets High/low potassium/phosphate foods (if required) Healthier verse unhealthy takeaway options</p>
Item 4: What – procedures	<p>Phase 1: Intensive coaching using telephone calls and tailored text messages. Each call was designed to align with each section of the workbook, and structured based on the 5As framework (Assess, Advise, Agree, Assist, Arrange).³ The overall sequence of calls had the purpose of aligning participants’ diets with a reduced dietary sodium intake to <100mmol/day and improving their overall diet quality in line with the Australian Dietary Guidelines.¹</p> <p>Intervention calls</p> <p>Call 1</p> <ul style="list-style-type: none"> • Welcome to ENTICE-CKD • Information about the program • Feedback on baseline outcome measures • Complete Section 1 – goal setting • Discuss section 6 – self monitoring • Begin section 2 - introduction the five food groups <p>Call 2</p> <ul style="list-style-type: none"> • Revisit goals

- Recap Australia Guide to Healthy Eating – answer any questions
- Continue section 2 – (plate model, snacks, salt, label reading, potassium and phosphate)

Call 3

- Revisit goals
- Answer any questions on healthy eating
- Complete section 3 – Active living

Call 4

- Revisit goals
- Revisit any questions about active living/ healthy eating
- Complete section 4 – Why is healthy eating important for my kidneys
- Complete section 5 - planning for success - how why and where you eat and managing slips

Call 5

- Revisit goals
- Answer any dietary or Active living questions
- Discuss section 7 - additional information / resources

Call 6

- Revisit goals
- Revisit any questions participant may have
- Discuss where to from here
- Adjust text message frequency if desired

Text message component

Text message type	SCT	Example text	Intervention		Control	
			Phase 1	Phase 2	Phase 1	Phase 2
Education	Outcome expectations	Dietary fibre intake reduces ur cholesterol levels and controls ur blood sugar. Include wholegrain breads & cereals, fruits & veg regularly	2-6	1-4	NA ^a	6-8
Self-monitor	Self-regulation	Hi [name], are u keeping track of ur fruit/vegetable intake every day? Remember ur goal to have 5 serves this week	0-2	1-4	NA	NA
Goal check	Self-regulation	Hi [name], did you reach ur goal to eat 5 fruits/vegetables 4 times this week? Text me back yes or no to let me know	2	2-4	NA	NA
Education (Safety protocol)	Low potassium diet	Choose high fibre, low potassium breakfast cereals. Good choices are Multigrain Weetbix, Rolled Oats, Guardian, Oatbritz, Special K	0-2 ^a	0-2 ^a	NA	0-2 ^a

Phase 2: Extended contact using tailored text messages only.

At the end of phase 1 (3 month study mid-point), participants completed their final coaching call and discussed their preferences for the timing and frequency of the phase 2 text messages. At 18 weeks, participants received another tailoring call (no dietary coaching) to make individualized adjustments to their text message timing and frequency for the remaining 6 weeks of the intervention.

Item 5: Provider

Two accredited practicing dietitians (RD equivalent) with additional training in behavior change, motivational interviewing and renal nutrition. Each participant in the intervention was assigned to one dietitian for the duration of the intervention.

Item 6: How

Phase 1 (month 0-3) Intervention: One-to-one coaching provided through 6 fortnightly phone calls, and tailored text messages at a frequency requested by the participant (TIDieR item 4 – Text message component).

Phase 2 (month 3-6) Intervention: Tailored text messages at a frequency requested by the participant (TIDieR item 4 – Text message component).

Item 7: Where

Participants were in locations of their choosing as the intervention was delivered by telephone/mobile.

Item 8: When and How Much

Phone calls: Intervention group participants received fortnightly phone calls for 3 months

Text messages: Intervention participants received fortnightly text messages for 6 months. Control group participants received text messages for 3 months (TIDieR item 4 – Text message component).

Item 9: Tailoring

Phone calls: Coaches could tailor the dietary guidelines to participants' individual comorbidities and goals.

Coaches documented any tailoring to the intervention in call logs.

Text messages: Tailored text messages were tailored to participants' names, set goals and barriers to achieving each goal (examples can be seen under TIDieR item 4 – Text message component).

Item 10: Modifications

Some participants who replied to the goal check text messages in a way the system could not recognize (i.e. not a yes/no response) were giving a tailored goal check reply message instead of the automatic system generated reply. No other modifications were made to the intervention during the course of the study.

^a Abbreviations: SCT: Social Cognitive Theory; Each text message utilized common abbreviations to reduce character counts. For example 'ur' refers to 'your', 'u' refers to 'you'.

^b Phase 1 was from baseline to three months. Phase 2 was from three months to the six month study end-point

^c NA = not applicable

^d Educational permutations were only available for coaches to use if a participant experienced hyperkalaemia or hyperphosphataemia

Supplement Table 3. Utility and acceptability questionnaire completed at 6 months.

Thinking about the text message component of the ENTICE intervention; please answer the following questions (part A).	
1. The text messages sent to me were useful in supporting me make a dietary change?	<input type="radio"/> Strongly agree <input type="radio"/> Agree <input type="radio"/> Neither agree or disagree <input type="radio"/> Disagree <input type="radio"/> Strongly disagree
2. The text messages sent to me were easy to understand?	<input type="radio"/> Strongly agree <input type="radio"/> Agree <input type="radio"/> Neither agree or disagree <input type="radio"/> Disagree <input type="radio"/> Strongly disagree
3. The text messages sent to me motivated me to change my diet	<input type="radio"/> Strongly agree <input type="radio"/> Agree <input type="radio"/> Neither agree or disagree <input type="radio"/> Disagree <input type="radio"/> Strongly disagree
4. The text messages sent to me made me eat healthier?	<input type="radio"/> Strongly agree <input type="radio"/> Agree <input type="radio"/> Neither agree or disagree <input type="radio"/> Disagree <input type="radio"/> Strongly disagree
5. The text messages sent to me made me exercise more?	<input type="radio"/> Strongly agree <input type="radio"/> Agree <input type="radio"/> Neither agree or disagree <input type="radio"/> Disagree <input type="radio"/> Strongly disagree
6. How many of the text messages sent to you did you read?	<input type="radio"/> All <input type="radio"/> Approximately three quarters <input type="radio"/> Approximately one half <input type="radio"/> Approximately one quarter <input type="radio"/> None
7. What did you do after receiving the text message?	<input type="radio"/> Ignore it <input type="radio"/> Read and saved <input type="radio"/> Read and deleted

Thinking about the text message component of the ENTICE intervention; please answer the following questions
(part B)

8. Did you share your text messages with family friends or your health care providers?

- No
- Yes; (please specify)
 - Spouse
 - Other family member
 - Doctor
 - Nurse
 - Other Health Care Professional

9. The text messages sent to me were worded in a suitable language

- Yes
- No

10. The text messages sent to me were too regular

- Yes
- No

11. The text message program (over 6 months) was long enough?

- Yes
- No

12. The text messages sent to me were at an appropriate time of the day/night?

- Yes
- No

Supplement Table 4. Semi-structured Interview Schedule.

<i>Focus Point</i>	<i>Key questions and prompts</i>
<p><i>1. Warm Up, rapport building, experiences</i></p>	<p>I'm interested to hear about your story with a kidney condition. Would you be able to tell me about your story from when you first found out, how you felt and your journey up until now?</p> <ul style="list-style-type: none"> - Can you tell me how you felt, or your initial reactions, when you were first diagnosed? - What was your experience with the healthcare system and dietitians before the ENTICE program? <p>Can you talk me through how you got involved in the program? What happened?</p> <ul style="list-style-type: none"> - How and why did you sign up? (Motivation? Knowledge? Priorities?) - Who influenced your decision to take part in the program? How? Why? - Did your doctor recommend the program? Did they have an influence on your decision to take part? (Support/pressure? Influence of medical professionals?) <p>What happened after you signed up for the program?</p> <ul style="list-style-type: none"> - Did you meet with a dietitian? How did you find that?
<p><i>2. Barriers and facilitators of adherence to program</i></p>	<p>Before ENTICE, did you have any needs, challenges, concerns about diet? Could you briefly tell me about that?</p> <p>To what degree does the ENTICE program meet your needs or address what you want? How? Why?</p> <p>What do you like most/least about being involved in the program - why?</p> <p>What were some of the things that made the program easy/difficult to take part in?</p> <p>What are your thoughts on being in familiar surroundings while you're talking to [JK/MC]?</p>
<p><i>3. Telehealth delivery methods and frequency of contact</i></p>	<p>Let's move on to your experiences with the phone calls.</p> <ul style="list-style-type: none"> - What did you expect from the calls and did they meet your expectations? - What are your thoughts on never having seen [JK/MC] and building a relationship with them? - How do you think using the telephone is different to seeing someone in person? Feel any different being in a familiar environment compared to a clinic? - Can you share some things that made the phone calls easier/harder than seeing [JK/MC] in person? - Were you able to make the calls at a suitable time - how? - What do you think about the frequency of the calls? – why? - How did you feel about the length of the calls? Did you feel you were rushed during the calls? - Do you have anything more to add about the phone calls? <p>Let's talk about the text messages now, what did you think about getting the text messages from [JK/MC]?</p> <ul style="list-style-type: none"> - Can you give me an example of a text message that you liked the most/least? - Do you think the text messages were necessary - why? - What do you think about how frequently you got the text messages? Why? - Do you have anything more to add about the text messages? <p>You got a workbook at the start of the program.</p> <ul style="list-style-type: none"> - What are your thoughts on the information in the workbook? – why? - Can you give me an example of something from the workbook that had an impact on you? (Why? Motivation? Knowledge?) - Did you have any difficulties understanding the information in the workbook? - Did you show the workbook to anyone? Who? Why? What did they think? - Do you have anything more to add about the workbook?
<p><i>4. Usability of the program</i></p>	<p>Can you think of an example recommendation that [JK/MC] gave you about your diet or your lifestyle?</p> <ul style="list-style-type: none"> - What are some things that helped you/made it hard for you to follow recommendations? – why?
<p><i>5. Goal setting and self-monitoring</i></p>	<p>What are your thoughts on setting health goals?</p> <ul style="list-style-type: none"> - How do you feel about goal setting? - Can you tell me about your experience with goal setting before the program? - Did you set goals in the program? When? Are you able to tell me about one of your goals? - Do you think ENTICE helped you to achieve your goals - why? <p>One of the aims of ENTICE is to improve self monitoring –do you know what self-monitoring</p>

	<p>means? (Stuff you'll do without people reminding you, like writing down or taking note of what you eat or how active you've been)</p> <ul style="list-style-type: none"> - Do you find you do that? Why? - What impact do you think the program has had on your self-monitoring? (The way you go about it? How often?) - How confident do you feel with monitoring your diet? Why?
6. <i>Behaviour change</i>	<p>You have made some changes to your lifestyle in order to meet your goals [example]</p> <ul style="list-style-type: none"> - Will these changes be something that you'll continue to do? – how? why? - Can you tell me about your motivation to make changes before the program? - How and why did your motivation change during the program? - How do you feel about keeping motivated after the program? <p>Do you feel like your daily activities have changed since before the program? How? (Eating behaviour? Purchasing of foods? How physically active you are?)</p>
7. <i>Experiences</i>	<ul style="list-style-type: none"> - Did you feel that the recommendations from [JK/MC] were specific to you and nobody else? - Can you give an example of when you felt this way? - Were the recommendations clear? How? Why? - Do you understand why the advice was given to you? - Do you think the program and the telephone sessions were suited to your culture? - Did you share your experiences with the program with anybody else? Family, friends, other health professionals? How? Why? Did you find it helpful? <p>Imagine you became director of the hospital and you had the power to improve the services for people with kidney disease. What would be the top 2 changes you would make to improve the care and support for people with kidney disease?</p>
8. <i>Closing</i>	<p>We would like you to help us evaluate the program to help improve it and the difference it makes to patients. Is there anything that you think would be important to mention that we haven't covered?</p>

Screening and recruitment



Randomization



	Week	Intervention group	Control group
Phase 1	1	Baseline Visit	
	2	6x fortnightly telephone	Usual Care
	4	calls + tailored text	(workbook only)
	6	messages	
	8	+ workbook	
	10		
	12	Mid-point visit + telephone call	
Phase 2	14	Tailored text messages	Educational text
	16		messages
	18	Telephone call	
	20	Tailored text messages	
	22		
	24	End-point visit	

Supplementary Figure 1. Summary of ENTICE-CKD program delivery.

References for supplementary material

1. NHMRC. Australian Dietary Guidelines. In. Canberra: National Health and Medical Research Council, Department of Health and Ageing; 2013.
2. Hoffmann TC, Glasziou PP, Boutron I, et al. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *The British Medical Journal*. 2014;348.
3. Whitlock EP, Orleans CT, Pender N, Allan J. Evaluating primary care behavioral counseling interventions: An evidence-based approach 1 1The full text of this article is available via AJPM Online at www.ajpm-online.net. *American journal of preventive medicine*. 2002;22(4):267-284.