Original Article

Learner Reactions and Responses to Individualized Coaching on Communication Skills for Treating Completely Edentulous Patients

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Date of
Submisssion: 15-05-2018
Acceptance: 25-07-2018

Access this article online
Quick Response Code
https://www.jbcahs.org

ABSTRACT

Background and Objectives: Communication skills (CS) of each doctor vary as individual approach is unique. Assessment of particular skills they apply and what they lack in, permits us to individualize CS training i.e.dentist specific communication skill (DSCS). This study was designed to assess individual prosthodontic resident's skills while treating real patients and to subsequently plan individualized coaching to strengthen the deficiencies identified.

Material and Methods: Video recordings were done during treatment for 50 complete denture patients treated by six prosthodontic residents in a dental institution. The video interactions were analyzed to identify their individual strengths and weakness and an individualized coaching was planned. Post training the residents were observed while treating another set of 50 edentulous patients.

Results: It was found that each resident had an 'individual pattern' (IP) in practicing some skills as showing care and concern, empathy etc and were lacking in certain other skills e.g. consideration of psychosocial aspects etc.

Conclusion: Individual feedback and personalized coaching were very well appreciated by the prosthodontic residents and a change in their attitude and patient-centered approach were apparent.

Keywords:

Doctor-patient communication, Communication skills training, Complete denture treatment, Prosthodontic residents, Personalized coaching

INTRODUCTION

Unlike medicine, dental procedures involve high anxiety associated with the dental environment, technicality of procedures and patients inability to speak for extended periods during treatment.[1] Complete denture treatment procedures are unique among various dental procedures as it involves multiple factors which affect patient satisfaction and also multiple and lengthy interactions with the doctor (ranging from history taking to follow up visits), as compared to any other dental procedure.[2,3] While doing time taking procedures like complete denture, effective communication could be hindered (long working hours intraorally with constant placement of trays, denture base, rims and trial dentures etc in patient's mouth). [2, 4] Also the discomfort caused due to pain and pricking, burning sensation, retention of saliva in mouth and gagging during various stages e.g. impression making due to various impression materials may add to it. Other contributing factors which may influence the communication dyad positively or negatively during complete denture treatment are psychological factors of patient, patient personality, geriatric factors, expectations from the denture and the dentist and attitude and communication style of the doctor. [2]

It has been found that patient's anxieties relate mainly to issues during treatment, and therefore dentist patient communication is potentially more complex during treatment and is at least as important as at consultation. [5] The standard tools for assessment and feedback of communication skills of dentist may not cover different treatment aspects in real patient scenario. It has been found that just

giving feedback does not cover the full picture of skilled medical communication.[6] It requires understanding and adaptation of doctor to the specific characteristics of the patient and the situation. The importance of the usage of certain communication skills depends on the relevance of that skill in the specific context.[7,8] Therefore, there is a need to explore which of the communication skills are applicable in the particular clinical setting, skills already being used by doctors and those that are not being practiced properly and individual differences in communication style of the doctor.

Literature review revealed that direct dental patient involvement was lacking in many of the studies to assess dental student communication skill in their interaction with patients.[9] In addition, assessment is limited to dental interviewing or consultation skills and that studies have not explored interpersonal communication intra or post operatively.[9] Relevant communication skills required during performing a particular procedure in daily clinical practice, while dealing with real patients are of great importance and hence should be taught and implemented in dental education.

With this background and identification of lacunae in dental communication skill literature, this study was planned to identify individual strengths and weakness of the Prosthodontic residents and give individualized feedback and follow them for any change in attitude. The research question addressed for the study was whether individualized assessment and training of communication skills of residents during real patient treatment is effective?

MATERIAL AND METHODS

This study was commenced after getting approval from Institutional Ethical Committee (protocol number-PhD/2016/03/07) and was conducted in the Department of Prosthodontics for two years between April 2016 to April 2018. Informed consent for participation in the study as well as permission regarding interactions being video recorded was obtained from the 6 prosthodontic residents as well as the 100 edentulous patients (50 pre and 50 post training) willing to participate in the study. The doctor-patient treatment consultations during complete denture treatment were video recorded and analyzed. This study was qualitative in nature and focused on descriptive outcomes.

Residents belonging to second and third year were requested to participate in the study since they are more experienced in dealing with patients and treat plenty of complete denture patients during the postgraduate course. Residents participating in the study were not exposed to any communication skills course or program before. All of them were well versed with the local language.

The interactions were followed during various steps of complete denture procedure. The video recordings were analyzed using the Kalamazoo scale, [2,10,11] which is a validated scale commonly used for assessment of communication skills. Since it is a generic scale, some of the contextual observations (which were of practical importance) related to complete denture treatment could not be fitted and were noted as "Beyond Kalamazoo".[2] The analysis focused on the doctor's handling of communication dyad with real complete denture patients. All the included video recorded interactions were meticulously analyzed by primary investigator and selected video tags were shown to the other raters and consensus charting was done.[2] Individual strength and weakness of the residents in communication skills were analyzed and noted down. (Table 1)

Initially a general module concentrating on the relevant skills required for handling a complete denture treatment was conducted. [2,12,13] Subsequently, individualized session was planned keeping in mind the aspects to be stressed for each resident based on the observations made from the video recordings. The identification of strength and weakness was on the basis of repeated performance of the particular behavior in all the patients they treated. The significant interactions (depicting strength and weakness) were made as video clips which could be shown to the residents in the individual sessions in case if they were interested or if there was any disagreement. Pre training, the residents were asked to write self reflection of their strength and weakness in communication skills. (Table 2)

In the individualized video based feedback session each resident was called inside the chamber one at a time by the resource persons. They were informed at the beginning of the session that the exercise was purely for fact finding and not fault finding and they were made comfortable. They were also informed that video recorded interactions in the form of video clips will be shown to them only if they wish to see it. However, after they knew the atmosphere was supportive and friendly, they, for their improvement were keen to know and see the observations about them.

Table 1: Pre-session-strength, weakness in communication skills (Video based observations)

Resident	Strength	Weakness
Dr.A	K-Shows care and concern, maintains even tone BK-Explains about procedure before starting treatment, unable to pick up non-verbal expression	K-Lacks in eliciting agenda and allowing patient to ask questions BK-Does not explain and motivate regarding the importance of compliance and follow up
Dr.B	K- Takes patients opinion in decision making BK-Demonstrates how to do jaw movements, provides information about procedure to be done	K-Lacks in eliciting agenda, showing care explicitly and uses jargons(difficult words) BK-Lacks rapport building, gets distracted often, informs about anatomical limitations frankly which may hurt them, lacks listening skills, unable to pick up non-verbal cues of patient.
Dr.C	BK- Demonstrates patients how to do jaw movements, tells limitations, acknowledges complaints, engages patient in talk while doing procedure	K-Lacks eliciting agenda, asks closed end questions, does not allow patients to ask questions BK-Shows non verbal expressions of disinterest & irritation if patients do not follow instructions, lacks listening skills & rapport building, unable to pick non verbal cues, gets distracted during treatment, does not motivate regarding the importance of follow up
Dr.D	K- Shows care and concern, uses tone, pace showing care and concern BK-Engages patient in talk while doing procedures.	K-Does not elicit agenda, does not allow patients to ask questions BK-Does not inform about procedure to be done, lacks rapport building, misses nonverbal cues, does not motivate regarding the importance of follow up
Dr.E	K- Shows care and concern for the patient BK-Explains about the procedure before starting, notices body language and observes patient as a whole	K-Does not elicit agenda, does not allow patients to ask questions BK-Lacks rapport building skills, misses elicitation of non verbal cues, is frank and rude while informing anatomical limitation and affordability, does not motivate regarding the importance of follow up
Dr.F	K- Maintains a soft tone and slow pace, insists and takes opinion repeatedly regarding the procedure BK-Shows care and concern, informs prior to performing procedures, takes excuse before attending phone call or going in between the procedure, often puts off chair light before leaving	K-Interrupts patients when they are talking and diverts from patient complaints, misses patient agenda, asks closed ended questions, does not allow patients to ask questions BK-Rapport building not consistent, misses elicitation of non verbal expressions, not very clear on answering skills, does not motivate regarding the importance of follow up

*K-Kalamazoo, BK-Beyond Kalamazoo

Feedback was given on each resident's observed strengths and weakness. Their strengths in communication skills were appreciated and shown to them. They were enquired how, when, where they learnt those skills and were motivated to continue with the same. Their weaknesses were also explained and shown to them keeping in mind their body language and receptiveness and were told how to fine tune those. They were also motivated that if they followed these skills they will be humanistic dentist rather than just any other dentist who can perform patient centered practice. The same feedbacks were printed in written format with the options of 'I Agree', 'I Disagree' (if so comment why?) and 'No Comments'. Post session they were asked feedback on how the individualized sessions helped /will help them in enhancing their strength and reducing their weakness. (Table 3)

Table 2: Self-reflection (pre-session) of strength and weakness and self analysis of skills

Resident	Strength	Weakness	Self analysis of existing C S
Dr.A	Politeness, ability to finish treatment fast.	To make patient understand in simple language.	"I have found myself doing fine. Managing patients with hearing problem or mental disabilities was difficult".
Dr.B	"My continuous interaction with patients for past 15 years in private practice before joining residency"	"I lose my perseverance when patients are unable to understand instructions inspite of telling multiple times".	"Patients with old dentures are psychologically convinced and well adapted and become exacting when new denture is given to them. I find it difficult to manage".
Dr.C	"Explaining treatment options to the patients"	"I get irritated when I have to explain many times"	"During first visit i always explain them about the treatment process".
Dr.D	"I think I am able to communicate to some extent depending on patient behavior".	"I think I should improve on the duration of procedures and communication".	"I think I should spend more time with patients, I think I am able to communicate but not to the full extent".
Dr.E	"I am good with my communication skills as patients feel comfortable talking to me. I am an avid listener".	"I am bit lazy at work and so I have to convince the patients if there is a delay in work".	"Since complete denture procedures involve more than 5 appointments it becomes difficult to convince and is a big task".
Dr.F	"My empathy for the patient"	"I lag in communication to convince the patient for better treatment option".	"I know that technical and communication skills go hand in hand and patients are satisfied even when dentures are loose in fitting. I wanted to improve my communication skills but never got an opportunity".

When asked if this one session was enough for enhancing their skills, the students requested for periodic feedback. Therefore, it was planned to have periodic sessions (based on Balint method) to study the retention of the skills taught. The same exercise of video based feedback session was repeated after a span of 1 year during which the residents finished treating another set of 50 patients post training sessions and improvements were noted. (Table 4) During the study period six Balint sessions were conducted wherein the observed changes were told and shown to them as video tags. The residents also discussed about the problems and scenarios encountered.

RESULTS

Table 1 shows the details on observed strength and weakness (video based) of residents' pre training. It was found that the strength observed in the residents were empathy, care and concern etc. Some of the residents felt that they are already good at their communication skills; some identified themselves to be confident due to long span of practicing years (in private practice) while others felt they are doing well because of their politeness, empathy towards patient and being good listeners. The weaknesses observed in them involved major skills such as rapport building, listening, questioning, answering, eliciting patient agendas, responding to fear, patient-expectations and non verbal expressions. Regarding the self perceived weaknesses, some of the residents felt that they got impatient and irritated in certain situations. They showed awareness about their lack in some aspects of communication skills but they could not pinpoint the cause of it, did not know what went wrong, or how to correct it.

The self-reflection of strength, weakness and self analysis of skills of residents before attending the sessions are shown in Table 2. The residents felt that since the sessions were individualized and confidential while discussing their weakness, they felt very comfortable and could concentrate more. They felt that seeing themselves on video-replays while interacting

Table 3: Self reflection (post-session) of strength and weakness and self analysis of skills

Resident	How will training help in enhancing strength	How will training help in reducing weakness	Post-session self analysis of CS
Dr.A	"In individual feedback session, observations about me were shown which helped me in realizing my strength."	"I am able to understand the areas of my weakness and will improve upon it. This program will definitely make me a better practitioner in the future".	"Individual coaching helped me in realizing what and how I was to the patients".
Dr.B	"I would be utilizing communication skills taught to me to improve rapport".	"From the individual sessions, I could see my body language and approach towards the patients".	"Individual session was very effective. Video sessions helped me to realize my strength and weakness towards the patients".
Dr.C	"I will try to develop good rapport building, listening and giving importance for non verbal expressions".	"I will try to change my distractions and give more attention to patient's non verbal expressions".	"From this coaching I learnt about communication skills, I will continue building good rapport with the patients and will start from first visit itself".
Dr.D	"It helped me to maintain and increase my strength (good rapport building) and gain more confidence in handling different kinds of patients with more care and concern".	"This program helped me to identify my weakness and how to overcome it".	"This program will definitely help me in improving my communication skills with my patients".
Dr.E	"I felt pretty confident that I will be able to implement the concepts that I have learned and my practice will be greatly benefitted by these set of skill enhancement on communication"	"My fear and confusion in dealing with patients with negative attitude will be greatly reduced in future by utilizing this course".	"Since the session was very interactive and it was individualized, I was able to learn more and better with clear focus on my doubts and opinions".
Dr.F	"This program made me realize my positive approach towards patients. I would like to take this on the positive stride and make use of these skills in my future practice to have better rapport with the patients".	"Unintentionally in certain situations I have failed to explain the procedures to be done and failed to meet patient's agenda at times since I had not elicited it. These will be corrected hereon".	"I needed individual coaching as such. I was able to analyze myself the way I communicate with patients and it made me realize that I can communicate in a better way after this session".

with patients was an eye opening experience: they came to know of various aspects of interpersonal communication which they were practicing and were missing or were not aware of.

After attending the individualized session, the residents felt that they had realized their weaknesses in rapport building, eliciting patient agenda, picking up non verbal cues etc as revealed to them by the video-replays. It also revealed that that they could introspect and realize the mistakes done involuntarily by them when told and shown to them (Table 3).

The changes in communication skills post 1 year of training based on Video recorded observations are shown in Table 4. It was found after 1 year of observation that the residents were continuing to practice their strength and had improved on their weakness. They were able to pick up patients apprehension from ***non verbal expressions*** and address it, they had **started** ***observing patient on the whole*** and giving referrals for patient to General Medicine, Dermatology, Orthopedics and their family members to Orthodontics and Paedodontics Departments etc. They were able to address ***patients agenda,*** be it singing

Table 4: Changes in communication skills post-sessions (post 1 year of training)

Resident	K & BK	Video based observations
Dr.A	K	Shows concern, allows patient to talk more, elicits agenda e.g. problems with previous denture, uses open ended questions, clarifies doubts
	BK	Rapport building, listening skills, elicits expectations, uses neurolinguistic programming (explaining patients using simple examples from their field), motivates to wear dentures.
Dr.B	K	Greets patient, shows concern explicitly, enquires about previous dentures, asks expectations, involves patient in decision making, clarifies doubts
	BK	Observes non verbal expressions, improvement in rapport building and listening skills, involves family/ relatives in decision making, addresses patients agenda, motivates about the importance of follow up.
Dr.C	K	Shows concern explicitly, elicits agenda for new denture and expectations involves patient in decision making, clarifies doubts, gives evidence based explanation
	BK	Identifies non verbal expression of discomfort, talks area of patients interest i.e. "hot button" (e.g. asks about the sweets patient's shop), talks about agenda even if peripheral to treatment e.g. motivates for regular dental check up for his children etc
Dr.D	K	Shows care and concern, elicits agenda, asks expectations, involves them in decision making, clarifies doubts
	BK	Involves relatives in decision making, elicits expectations, rapport building, motivates, patient's share their problems-dental and non dental and show personal attachment e.g. considering as daughter.
Dr.E	K	Shows care and concern, acknowledges patients ideas and explains them, not dismissing them, elicits patients agenda, enquires problems with previous denture, respects patients ideas & beliefs, provides information
	BK	Informs prognosis, rapport building, acknowledges nonverbal expressions, understands body language, humorous, motivates (to wear denture, to reduce tendency of smoking), is able to identify type of patient and accordingly gives explanation
Dr.F	K	Shows care and concern, maintains eye contact, elicits patients agenda for visit, asks open ended questions, asks if they have any doubts, involves patients in decision making, enquires about support system, clarifies doubts
	BK	Rapport building, listening skills, limit setting, uses motivational interviewing, adapts to patient type, elicits non verbal expressions

*K-Kalamazoo, BK-Beyond Kalamazoo

in church, chanting shlokas or desire for small teeth etc. It was also observed that they were getting gifts, blessings, referrals from patients and comments like, "I am very satisfied with the present treatment; in the same department I had fought with staff earlier and was planning to hit them"; I feel that this doctor has joined this institution for my sake." Patients are ***sharing their problems*** - dental and non-dental problems like daughters marriage, problem with son in law, daughter in law, husband's health issues, feeling depressed and plans of joining old age home etc. Patients had started giving ***personal suggestions*** to the residents on opportunities abroad, applying for visa, the need to be careful with colleagues in the department and not to develop personal relationship with them, to finish the course and get married etc. It was also observed that the care and concern was vice versa from patient's side which was evident from enquiries regarding doctor's health, enquiries regarding their dull face and whether the doctor had food.

DISCUSSION

This study focused on strength and weakness in the communication skills practiced by individual residents in real time practice while treating complete denture patients. Unlike other dental procedures, complete denture patient management requires blend of communication skills namely prior information about procedures, number of visits, time taken for each visit, listening to their agendas, fears and concern, showing empathy, care and concern, understanding non verbal cues, involvement in decision making, allowing them to question, counseling, motivation, clear and understandable instructions avoiding jargons and reassurance etc which if lacking may deteriorate the communication dyad.[2,4]

Wide variation has been observed in the formal training of communication skill competency in most of the universities for residents to become a general practitioner [6] and to use a patient-centered communication style.[10, 11, 14, 15] There is a heterogeneity within the literature surrounding communication skills and the assessment of these skills at the postgraduate level of training and beyond.[16] Till date, the literature does not include reports of individualized evaluation and training of communication skills in postgraduate residents during complete denture treatment. Some of the key determinants of patient satisfaction and patient-centered communication involves generic communication skills, such as exploring the reason for the consultation, checking if the patient understood, and expectation management [14] and the interpersonal aspects of care as trust, respect and empathy.[11, 14] In our study it was observed that, patients had started showing *personal attachment* e.g. considering as daughter ("I consider her as daughter and not as doctor"), giving *personal suggestions, inviting home for lunch and marriages, getting farm products, getting their relatives for treatment* etc. The follow up session included discussions on transference-counter transference interpersonal boundaries and professional behavior.

Feedback effectiveness and subsequent achievement is essentially mediated by learners' agentic engagement (a student's constructive contribution into the flow of the instruction they receive)[17] with feedback processes i.e. their proactive recipience (is a form of agentic engagement that involves the learner sharing responsibility for making feedback processes effective).[18] Learners willingness to engage with and act upon the feedback may be influenced by factors such as their trust and perception about the source of the feedback and also by the gestures, actions, and facial expressions of the of the people who give them feedback.[18, 19] In our study, the residents were made aware that confidentiality will be maintained and that the session was purely for fact finding and not fault finding. After they knew that the atmosphere was supportive and friendly, they for their improvement were keen to know and see the observations about them for their improvement.

In our study, we found that several components of these skills were missing or weak in the residents. Their communication style generally lacked the biopsychosocial approach; it was mostly biomedical. Patient's involvement and inputs in the treatment plan and during the treatment were missing. Most of the residents were able to practice skills such as showing care and concern (however not explicitly), demonstrating the jaw and tongue movements to the patients and adjusting appointments to suit patient's needs etc. At the same time they were lacking in some major skills as initial rapport building, listening, questioning, answering, eliciting patient agenda, fear, expectations and non verbal cues, summarizing instructions, checking compliance etc which directly affects patient satisfaction. These findings were surprising as it is expected that students would have learnt these skills during their undergraduate and practicing years. The probable reason for these could have been lack of role models or exposure to limited number of patient interactions during the period.

It was found that each resident had a typical pattern of approaching and dealing with the patient. Since the study population was small it was easy to meticulously assess the individual differences in communication styles among the six residents. Although the observations revealed mixed generic skills but typical dominant patterns were observed in each postgraduate for e.g. one of them was very authoritative and expected patients to perform all the jaw and tongue movements during impression making or jaw relation without understanding their limitations whereas another resident used to interrupt patients while talking and used to unknowingly deviate the topic of discussion (missing some pertinent points about agenda elicitation). However one of the senior resident was very empathetic and showed care and concern for the patients. When asked reason behind his behavior, the student told that during his undergraduate years, constant insistence by teachers to consider geriatric patients as their own parents while treating them got embedded in his mind. Moreover, he used to observe the dentist while he worked in a

private clinic after completion of under graduation. This strengthens the finding that medical specialists function as role models for students [20] not only by their behavior and actions but also by the instructions and message they convey to the student. However, it has also been found that it is not always true due to the transfer problems of communication skills from the tacit trainer to the trainee.[21] Also the concept of 'peer role model' was an interesting finding. A few of the junior residents revealed during individual session that they consider that particular senior as a role model in dealing with patients and used to observe his interactions, called him to convince patients for any particular treatment plan and to solve any difficult situations with patients.

Another interesting finding during the individualized session was that when one of the residents was informed that she was missing the non verbal cues, she initially disagreed. However, she got convinced on seeing replays of the video clips where these deficiencies were observed. Such unawareness was found in a recent study: all the doctors said that they were satisfied with their conversation, while the observers concluded that doctors did not practice the relevant communication skills.[21] Studies have shown strongly polarized attitudes toward audio/video feedback, with some disliking this format strongly,[22] whereas others found it beneficial for learning.[23] However, in our study we found video based feedback to be more trustworthy as it eliminates chances of bias of the observer and also gives opportunity for the learner to introspect his/her involuntary or oblivious actions. Observing students interviewing patients during clinical training is one of the most effective ways to gain a clear picture of their strengths, as well as areas for improvement in communication in a timely manner through feedback. It also helps in making students aware of these issues so that it can be emphasized early to form the basis of the doctor-patient relationship and have significant impact on patient care.[24]

In our study, we gave freedom to the residents to agree or disagree, which gave them opportunity to be more participative and interactive. An explanation for this could be that the doctors need to be confronted with their communication behavior before they can improve their communication skills.[21] According to our study's findings, individualized video based coaching would be the best way to do that. Communication skills training is not a 'one-size-fits-all' training, [25] and involves varied set of behaviors which a doctor has to execute depending on the circumstance and type of patient and therefore a standard protocol cannot serve the purpose. Moreover, each doctor has a unique pattern of dealing with the patient and all cannot perceive, learn and apply all the skills taught in a similar manner. Therefore instructors and teachers should observe the 'individual pattern' of the student and encourage them to continue with their strengths and fine tune the weakness observed, which will help them in applying the skills in the right way at the right time.

The study had a few limitations: the study was done on a small group of six prosthodontic residents; however it allowed us to concentrate on individual improvement. Further research with the involvement of more number of residents, performing other dental procedures can be explored to look for any variation in results and outcomes. This study was successful in answering the research question and concluded that individualized assessment and training of communication skills of residents during real patient treatment was effective and it revealed that 'individualized coaching for individualized pattern' (DSCS), based on video-analysis, video replay with evidence informed guidance-counselling make a lasting impact.

Our study concluded that each doctor had an 'individual communication pattern' learnt from their role models or inherent in them. Apart from the general coaching for improving quality of doctor patient interaction style and patient centered practice, a customized training with video based feedback may persuade them to introspect on their own performances and motivate them to improve in their own perceived areas of weaknesses.

CONFLICTS OF INTEREST

None

ACKNOWLEDGEMENTS

The authors are thankful to all the prosthodontic residents and patients who participated in this study.

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Diclofenac increased the risk of heart attack or stroke: BMJ Report

Objective To examine the cardiovascular risks of diclofenac initiation compared with initiation of other traditional non-steroidal anti-inflammatory drugs, initiation of paracetamol, and no initiation.

Design Series of 252 nationwide cohort studies, each mimicking the strict design criteria of a clinical trial (emulated trial design).

Setting Danish, nationwide, population based health registries (1996-2016).

Participants Individuals eligible for inclusion were all adults without malignancy; schizophrenia; dementia; or cardiovascular, kidney, liver, or ulcer diseases (that is, with low baseline risk). The study included 1 370 832 diclofenac initiators, 3 878 454 ibuprofen initiators, 291 490 naproxen initiators, 764 781 healthcare seeking paracetamol initiators matched by propensity score, and 1 303 209 healthcare seeking non-initiators also matched by propensity score.

Main outcome measures Cox proportional hazards regression was used to compute the intention to treat hazard ratio (as a measure of the incidence rate ratio) of major adverse cardiovascular events within 30 days of initiation.

Results The adverse event rate among diclofenac initiators increased by 50% compared with non-initiators, 20% compared with paracetamol or ibuprofen initiators and 30% compared with naproxen initiators. The relative risk of major adverse cardiovascular events was highest in individuals with low or moderate baseline risk (that is, diabetes mellitus). The absolute risk was highest in individuals with high baseline risk (that is, previous myocardial infarction or heart failure). Diclofenac initiation also increased the risk of upper gastrointestinal bleeding at 30 days, by approximately 4.5-fold compared with no initiation, 2.5-fold compared with initiation of ibuprofen or paracetamol, and to a similar extent as naproxen initiation.

Conclusions Diclofenac poses a cardiovascular health risk compared with non-use, paracetamol use, and use of other traditional non-steroidal anti-inflammatory drugs.

Source: *BMJ 2018;362:k3426*